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**FIG.1**

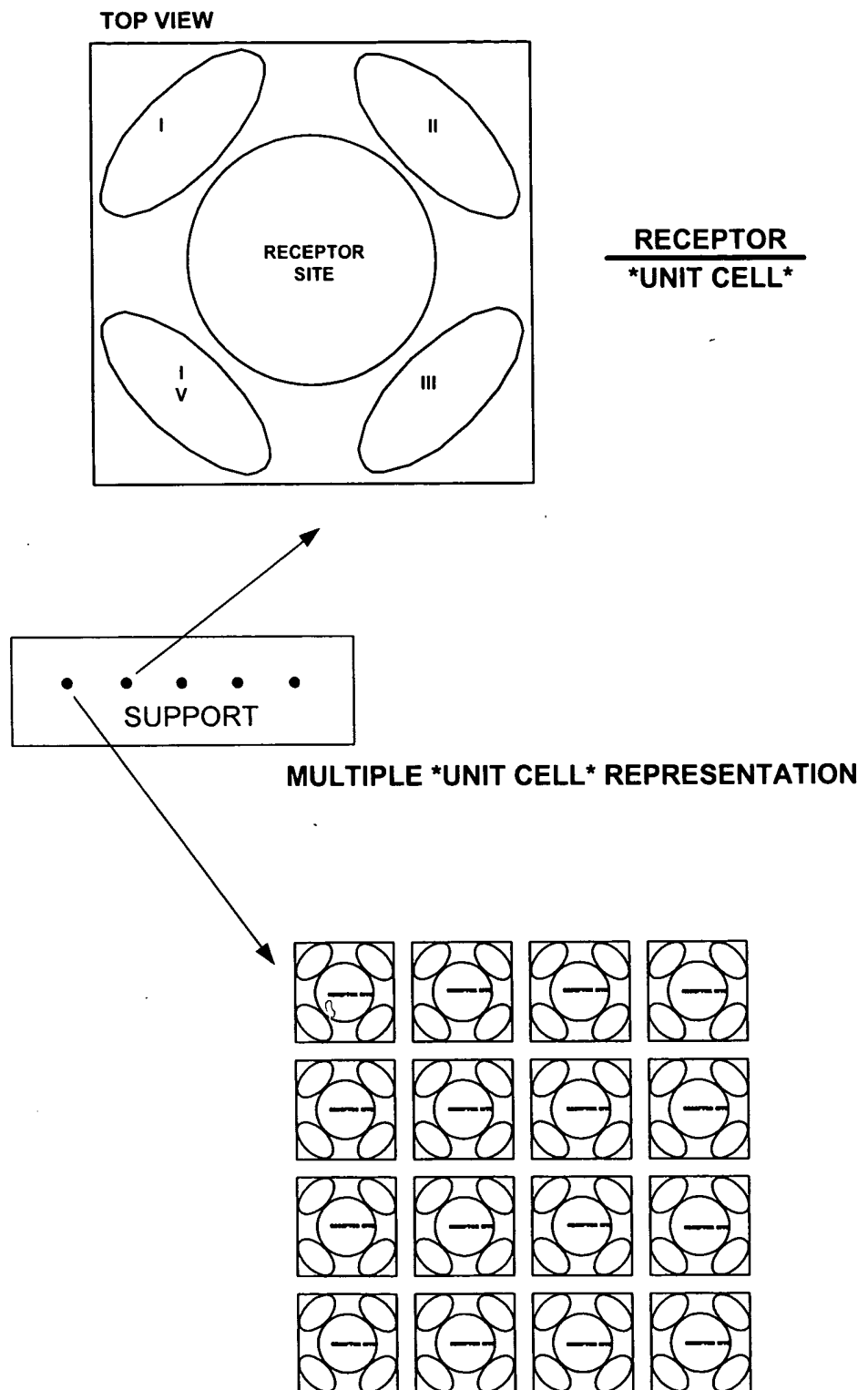
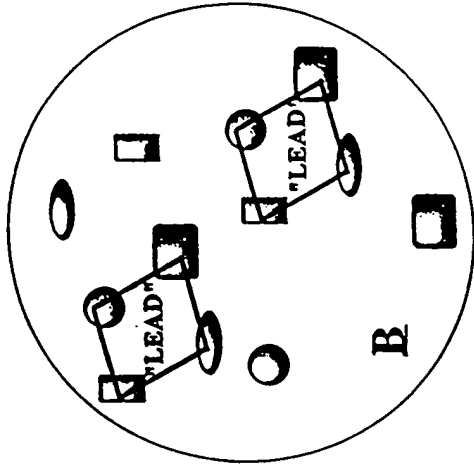
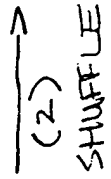
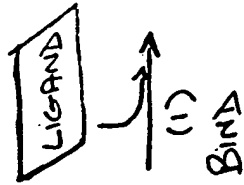
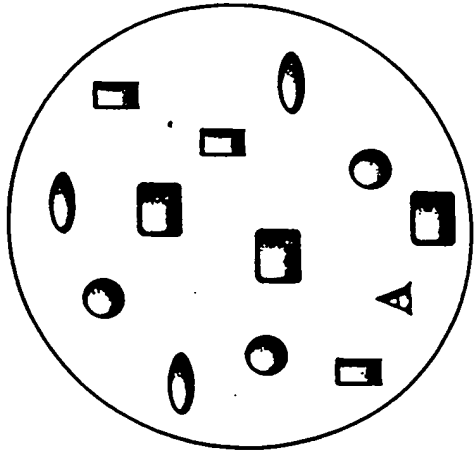
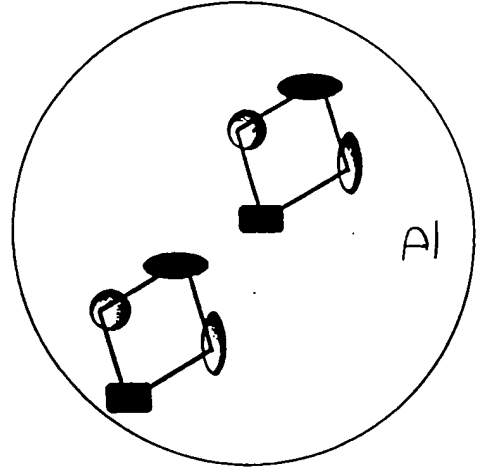
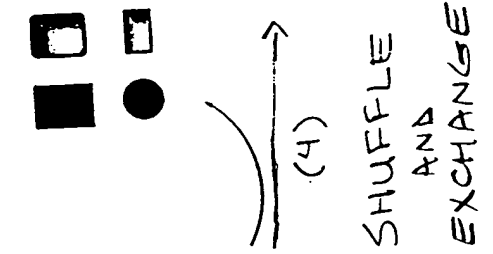
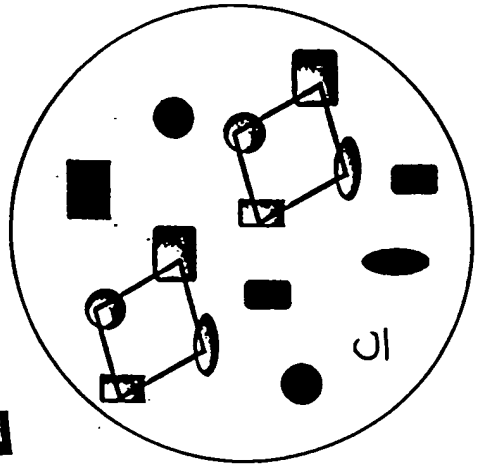
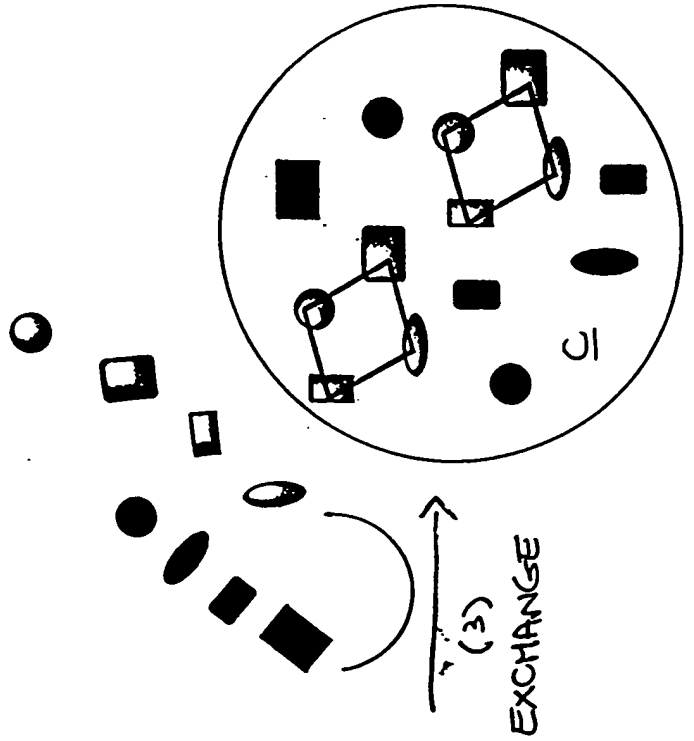


Fig 2

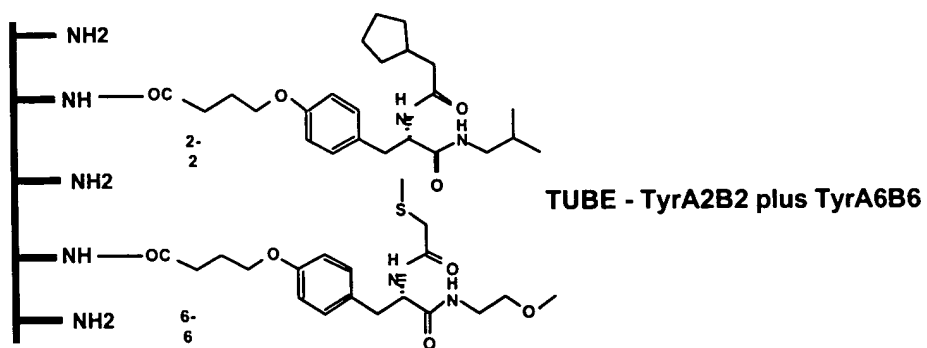
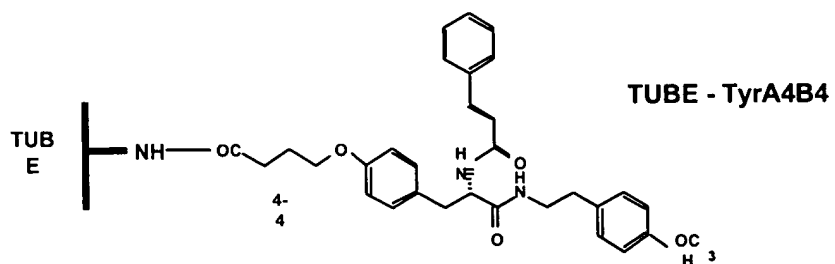
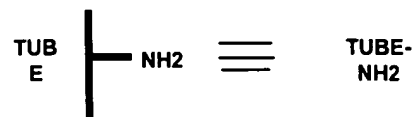
RANDOM DISTRIBUTION



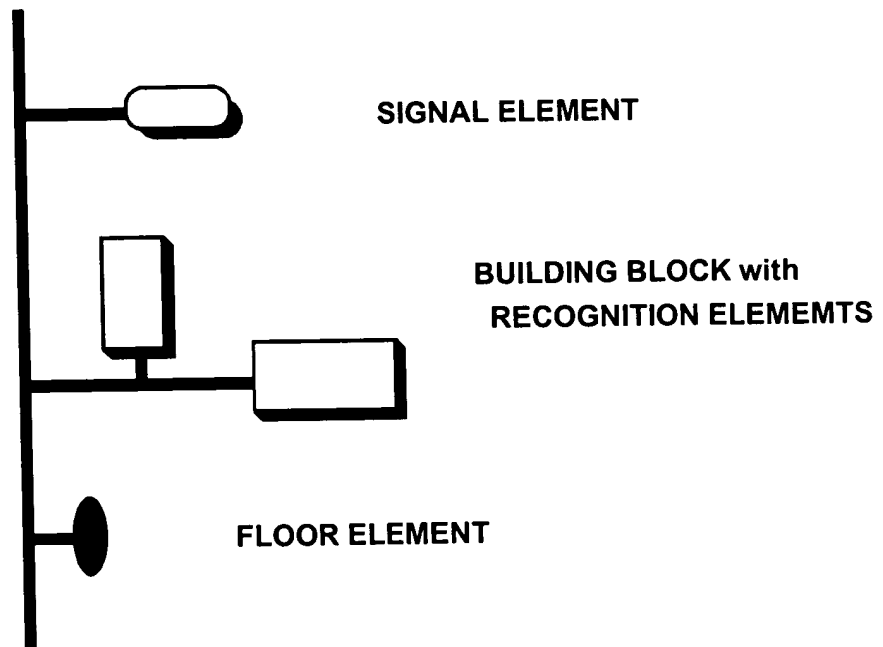
EQUILIBRIUM BINDING DISTRIBUTION



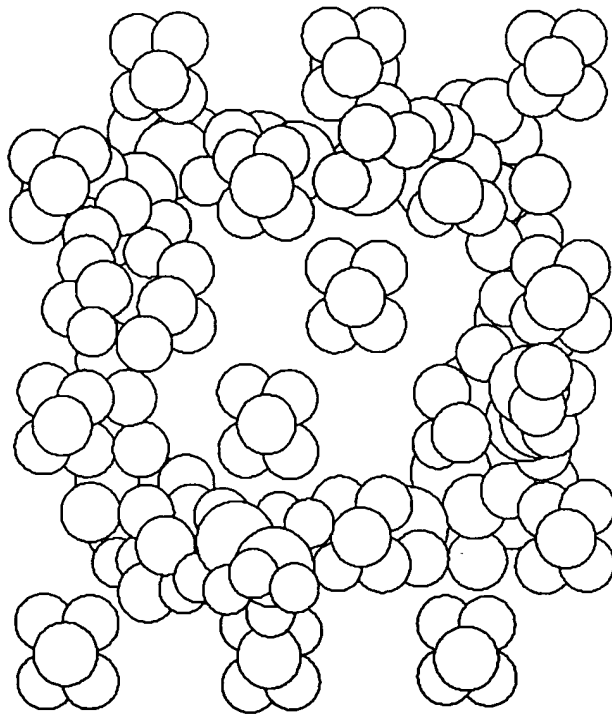
**FIG.3A**



**FIG.3B**



**FIG.4**

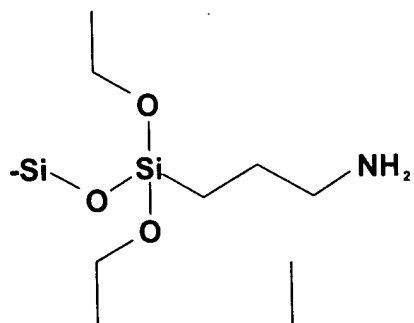


**FIG.5**

**-Si-OH**

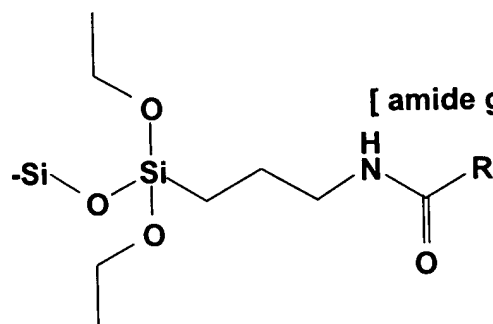


**[ native glass ]**

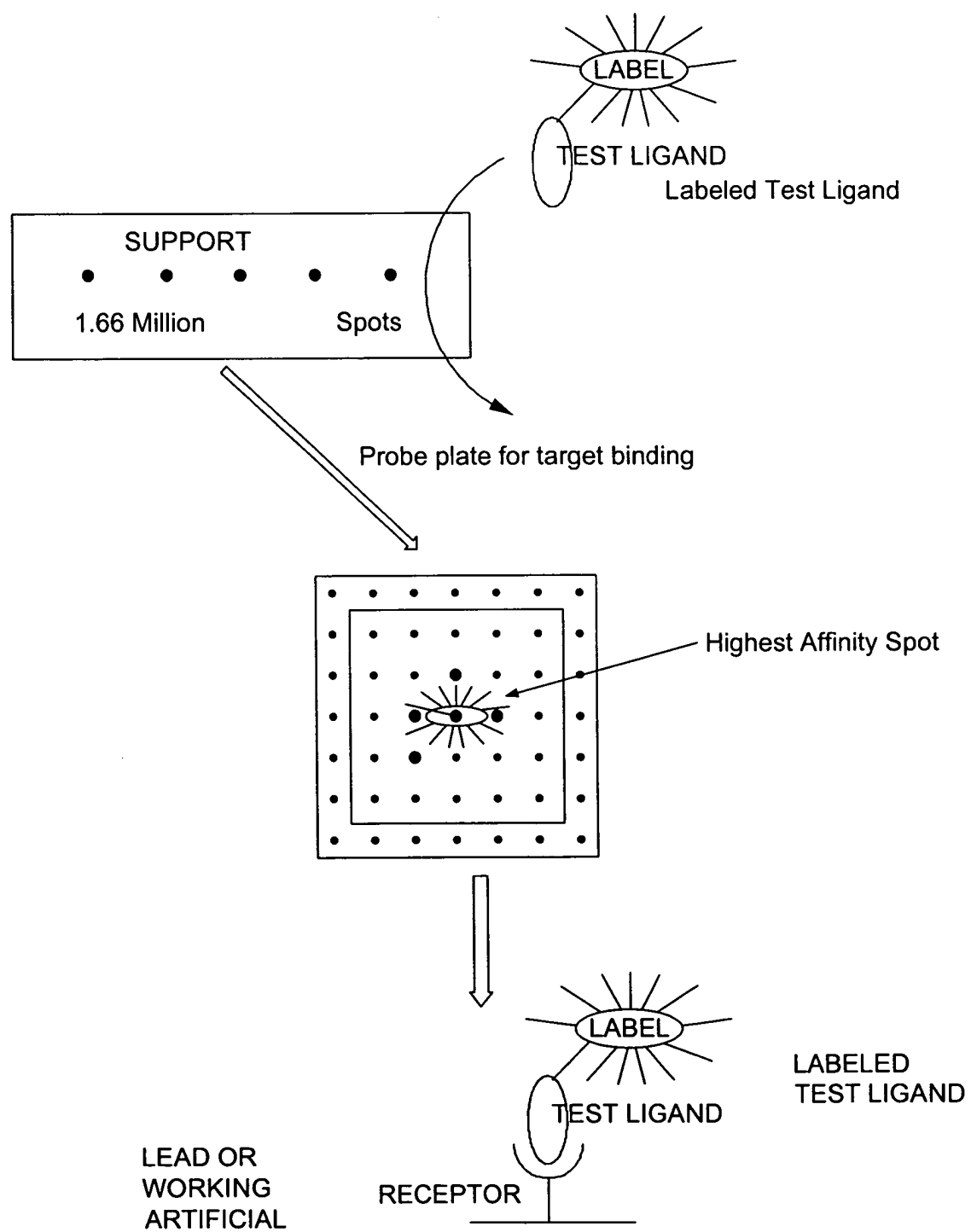


**[ amine glass ]**

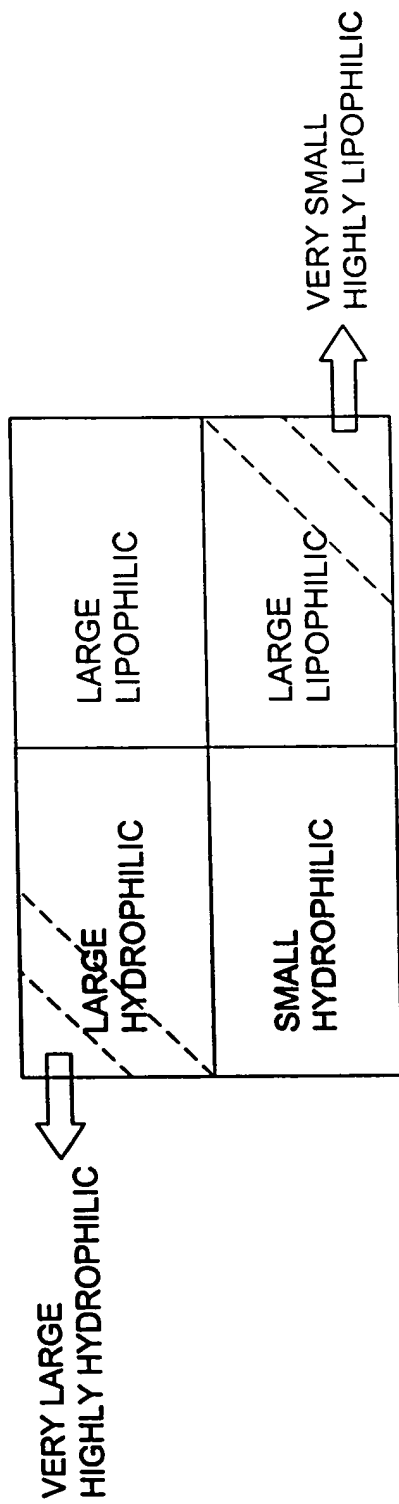
**[ amide glass ]**



**FIG.6**



**FIG. 7**



LOGP versus VOLUME

FIG. 8

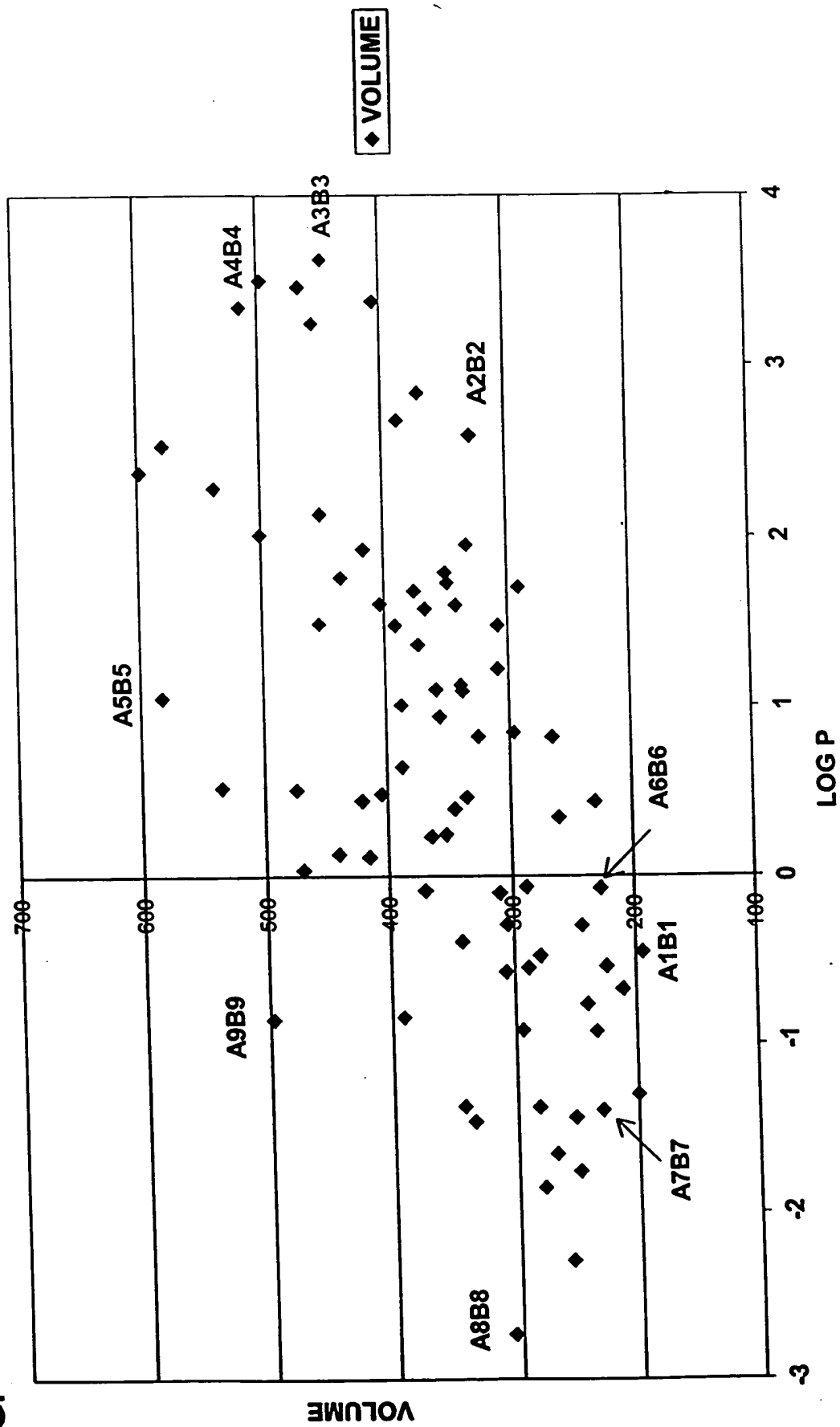


FIG 9 A

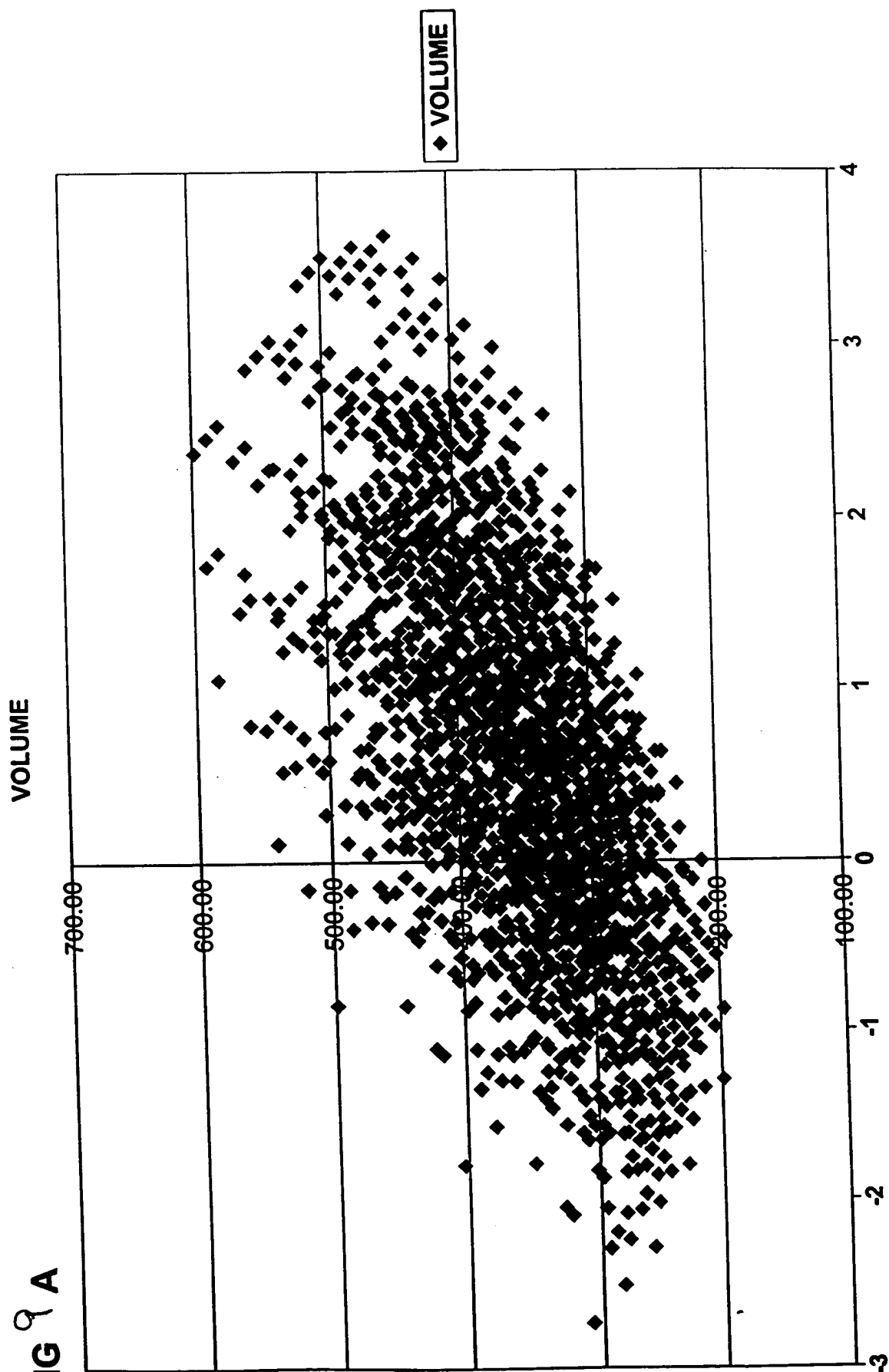


FIG 9 B

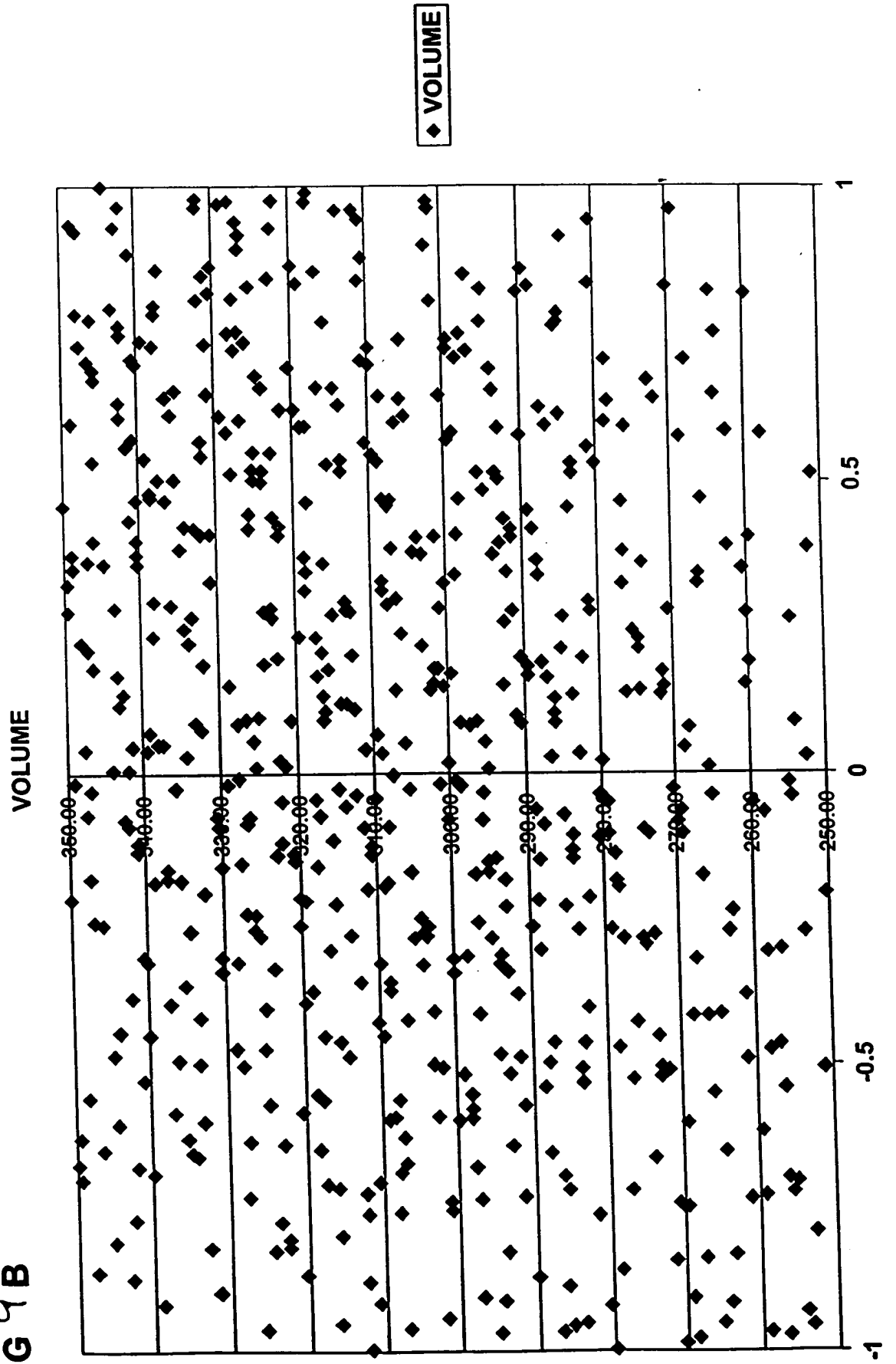
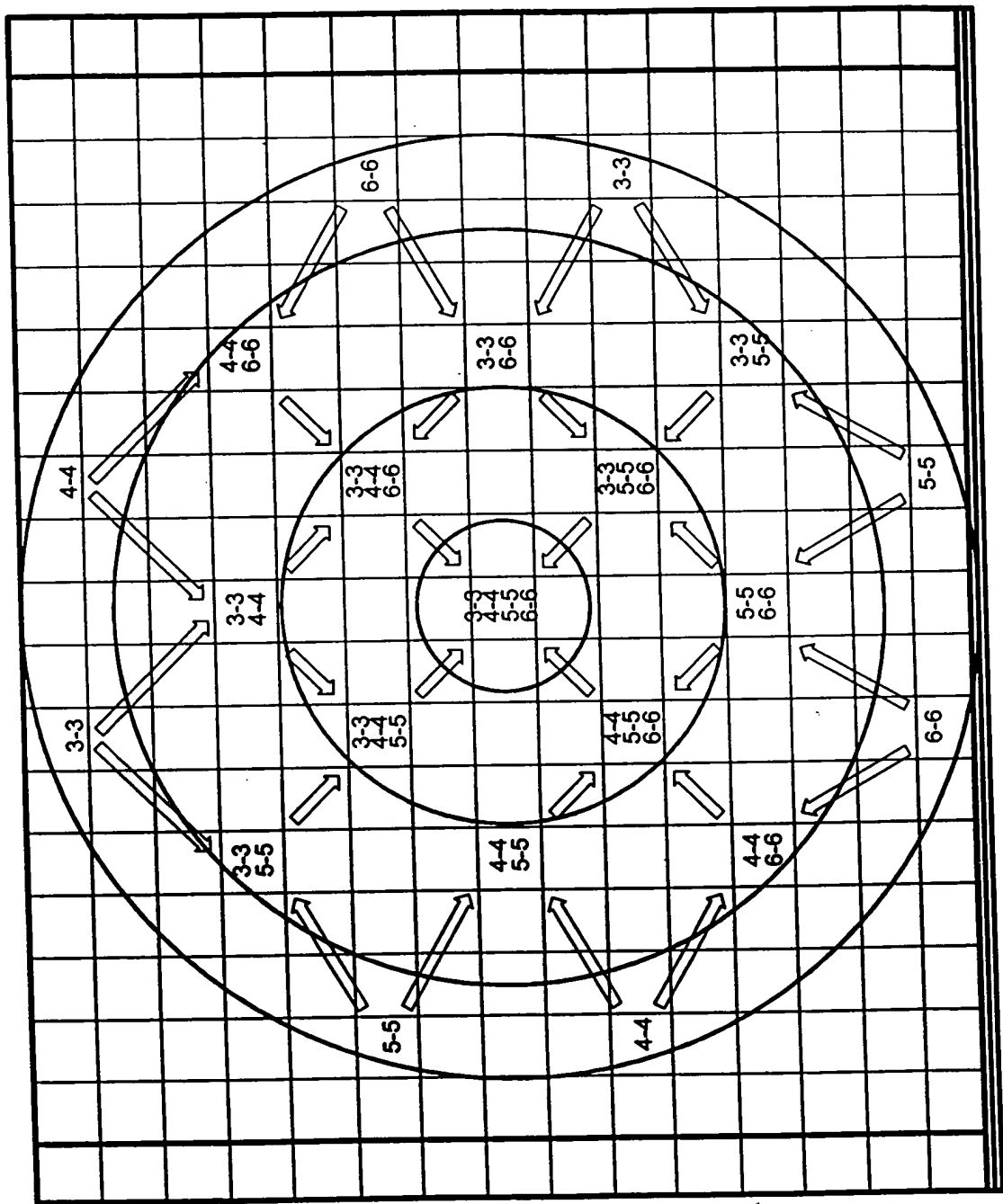
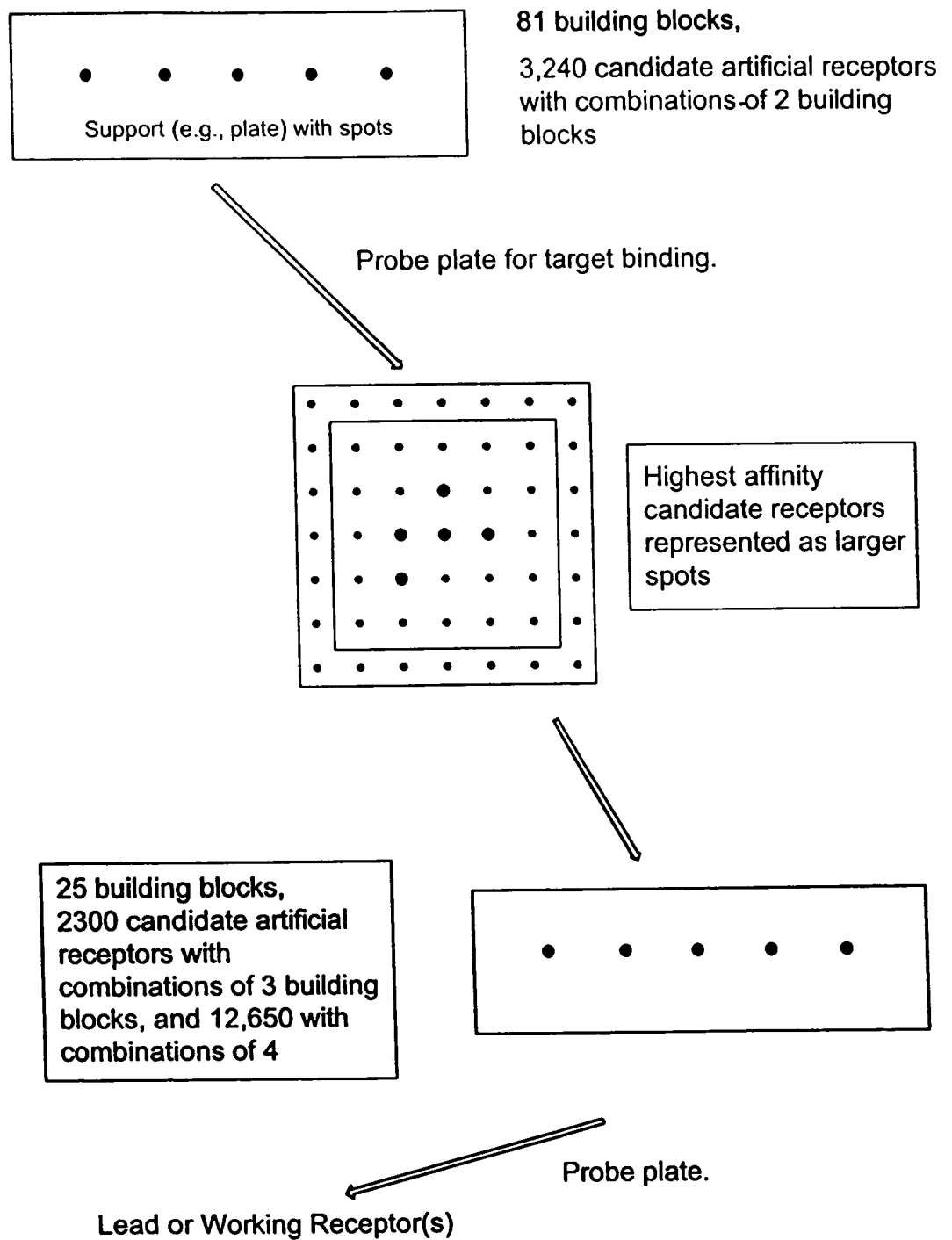


FIG. 10

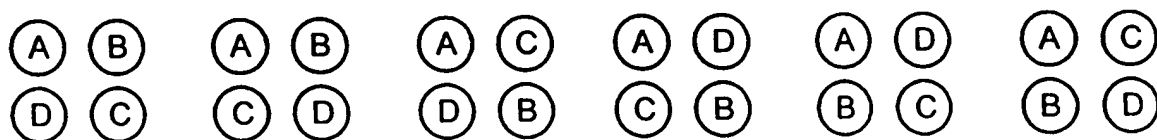


**FIG. 1\**

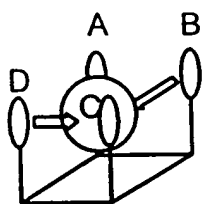


**FIG 12**

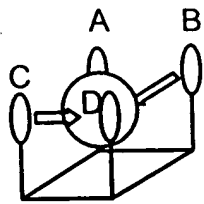
6 POSITIONAL ISOMERS OF 4 BUILDING BLOCKS AT  
VERTICES OF A QUADRILATERAL



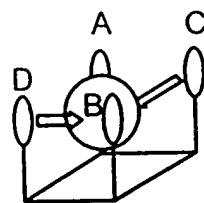
POSITIONAL ISOMERS ON A SCAFFOLD



ISOMER "1"



ISOMER "2"



ISOMER "3"

FIG. 13A

SIDE VIEW

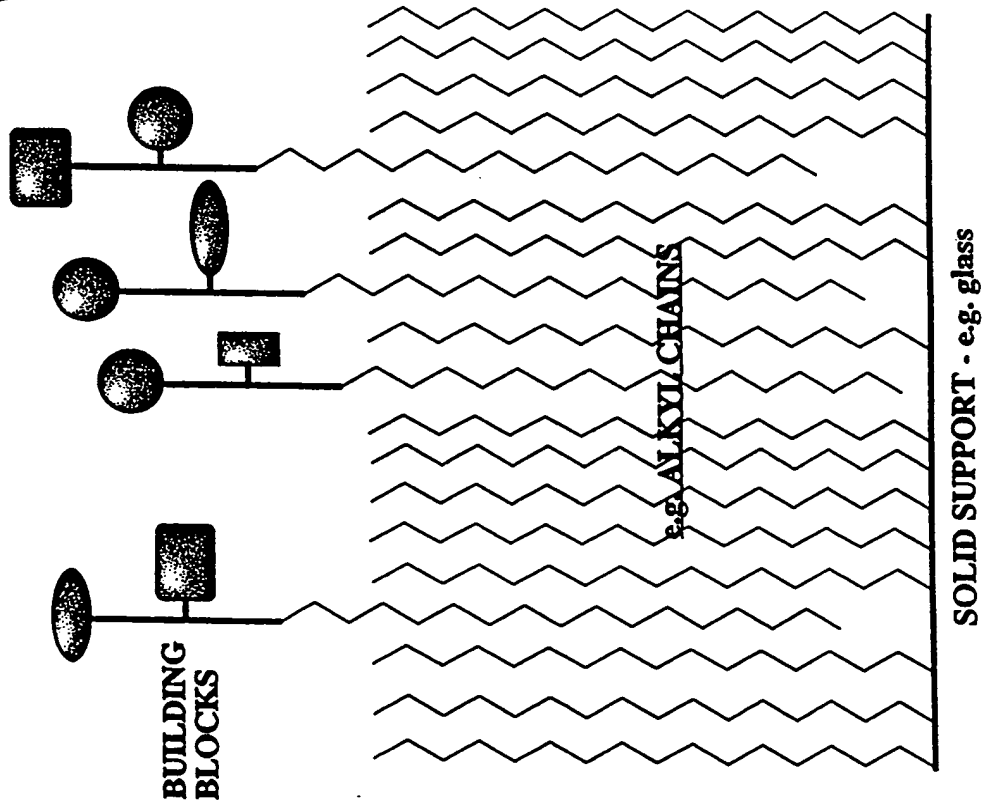


FIG. 13B

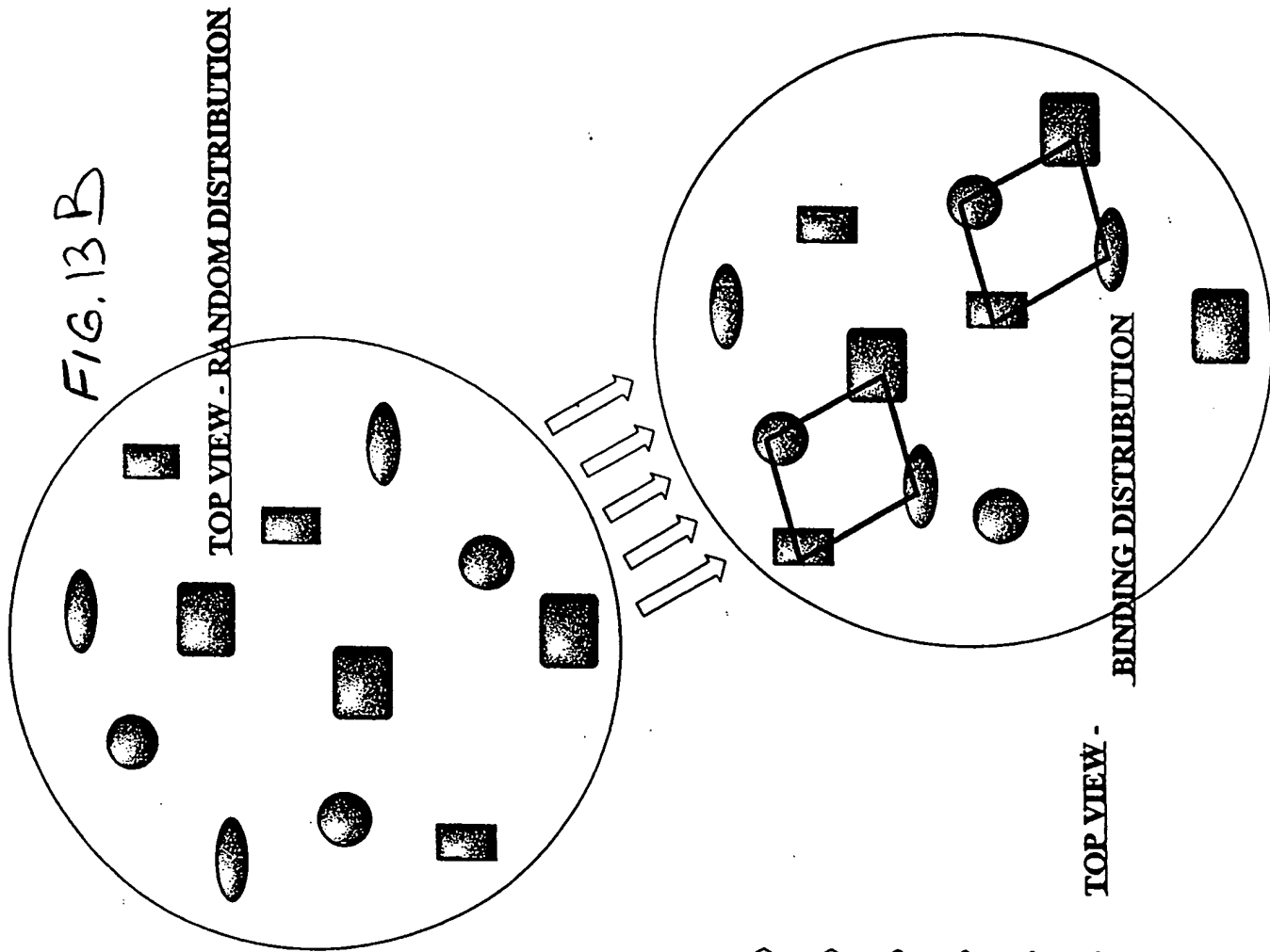


FIG 14

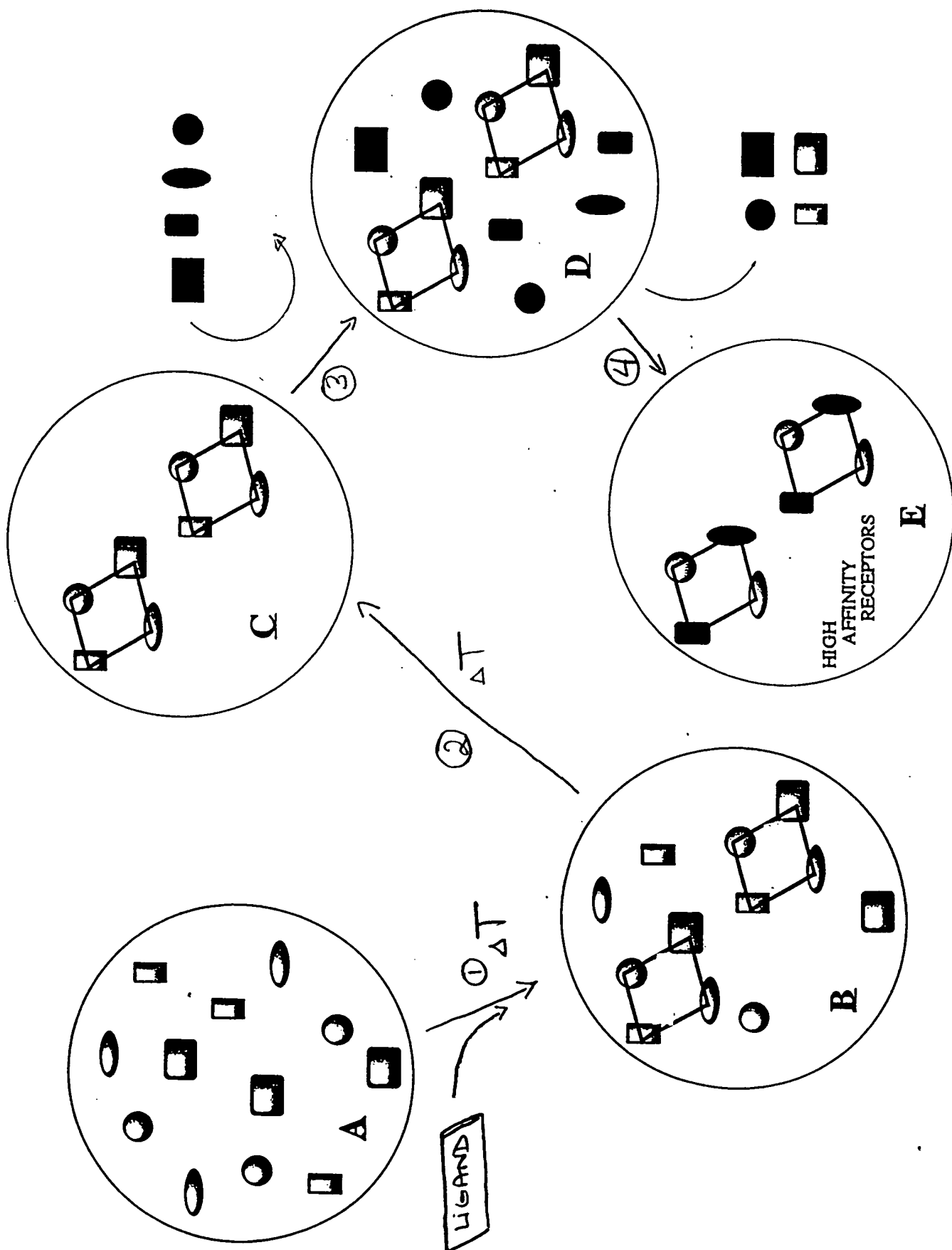
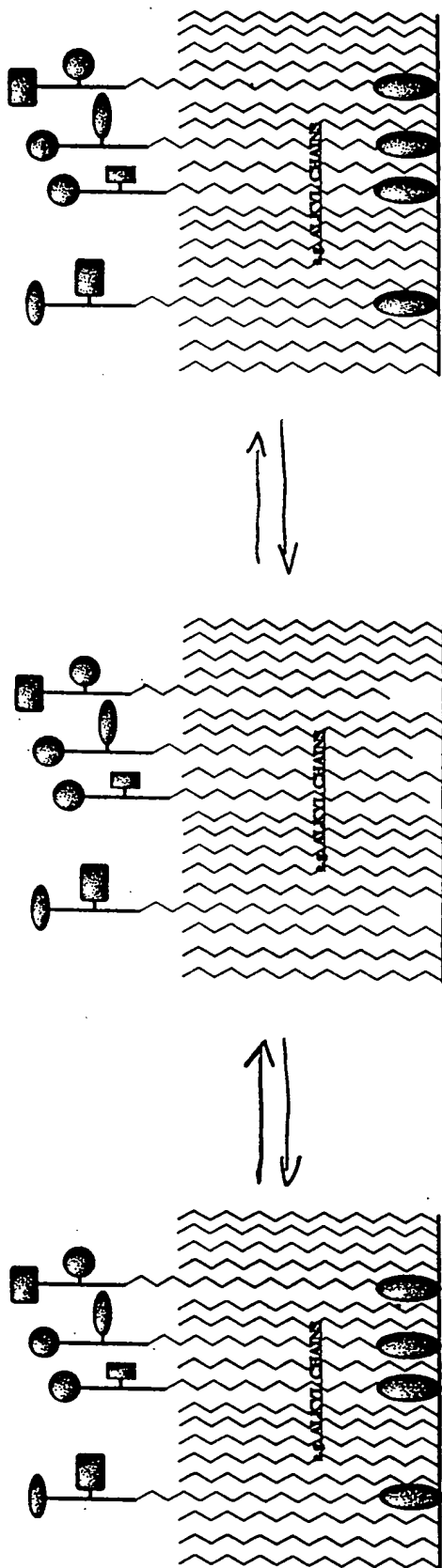
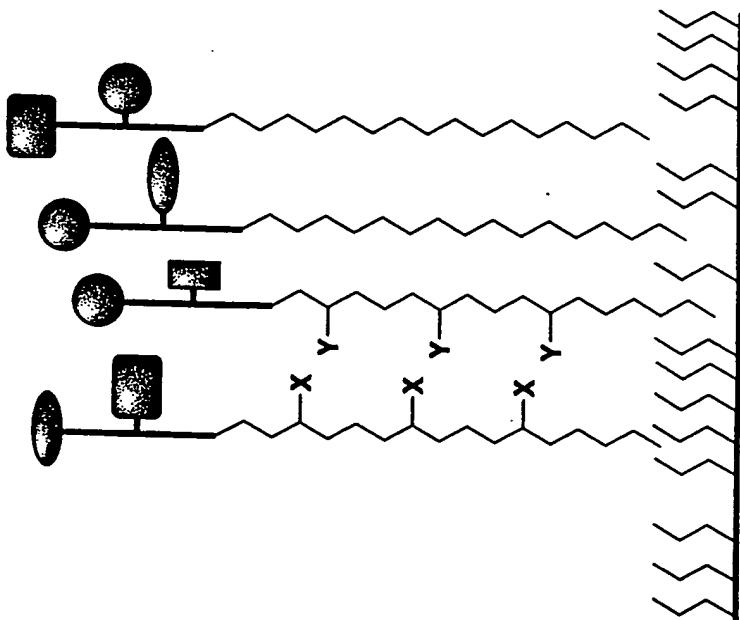


FIG 15

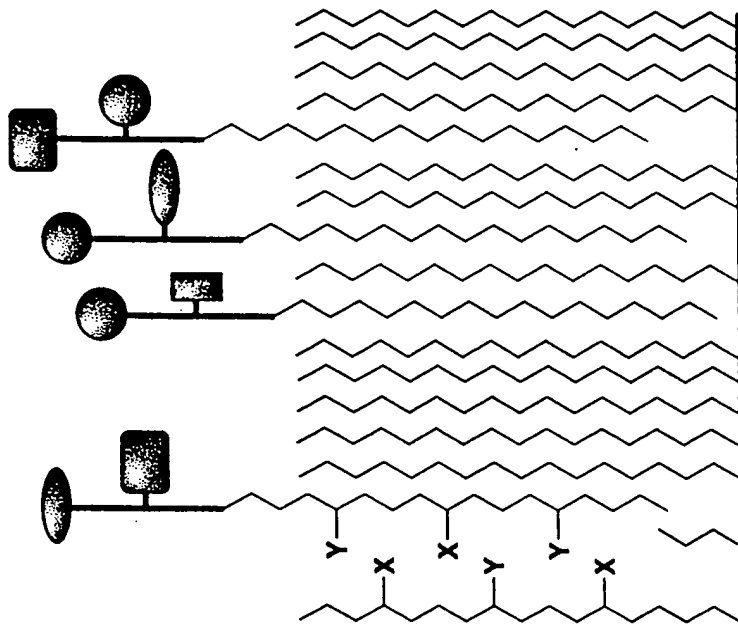


● = reversible bond

FIG 16

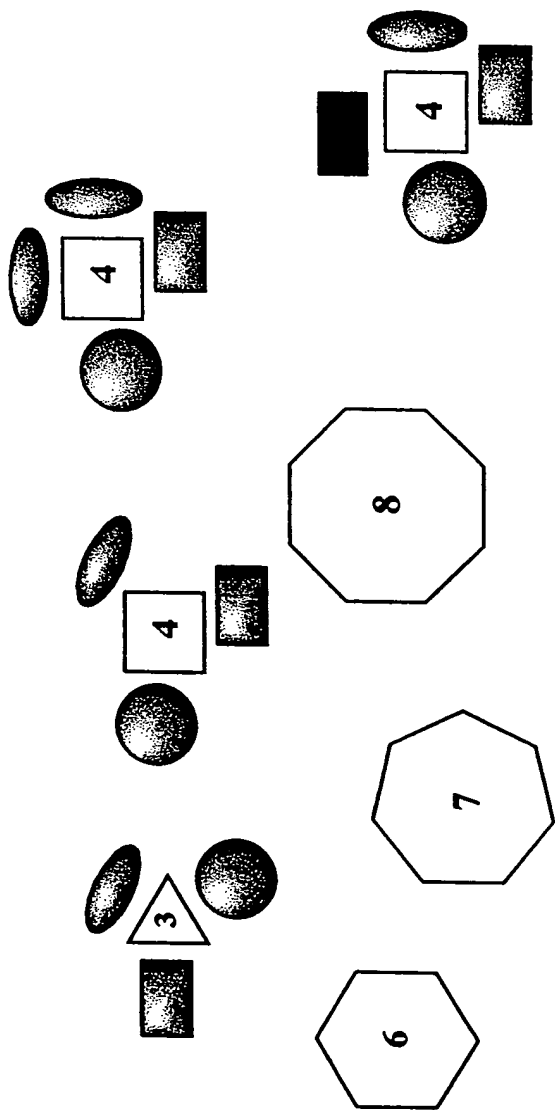


A



B

Fig 17



N = 81 Building Blocks

n=3	=>	85,320
n=4	=>	1,663,740
n=5	=>	25,621,596
n=6	=>	328,810,482
n=7	=>	3,522,969,450
n=8	=>	32,587,467,412

**FIG.18**

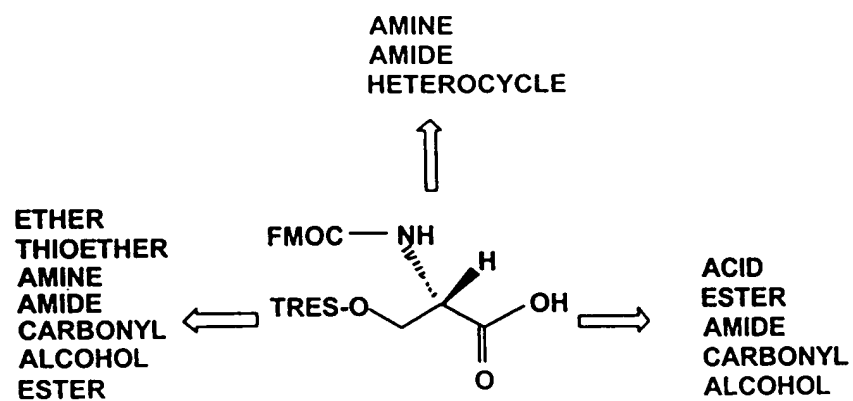
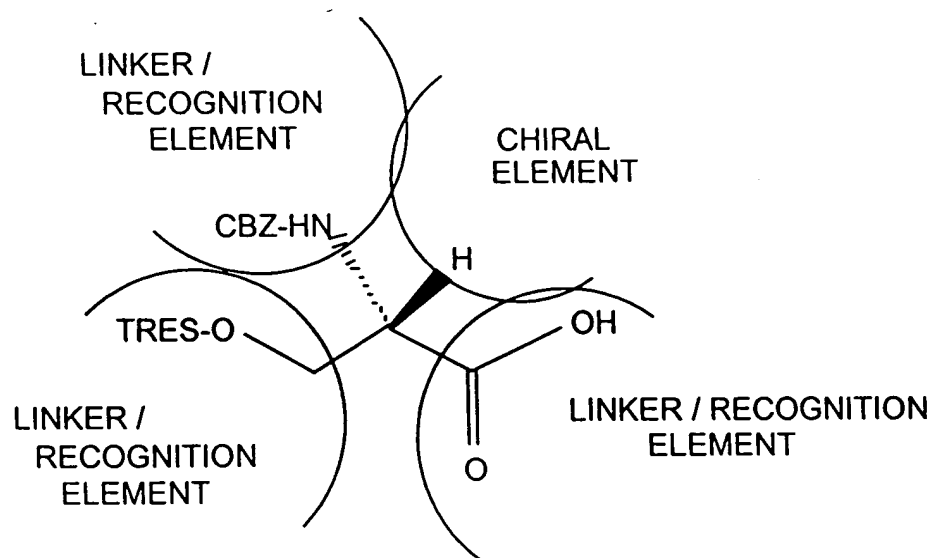
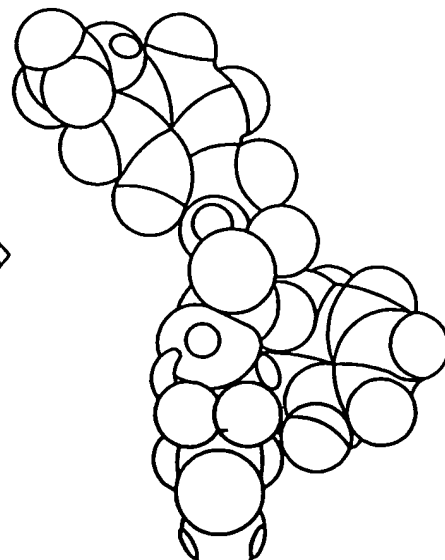
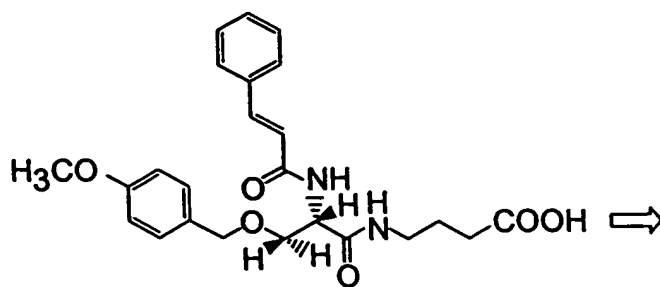
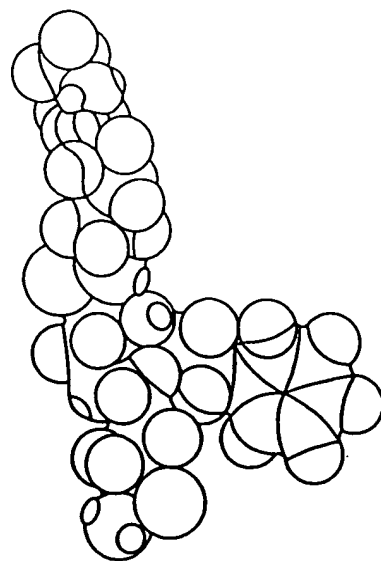
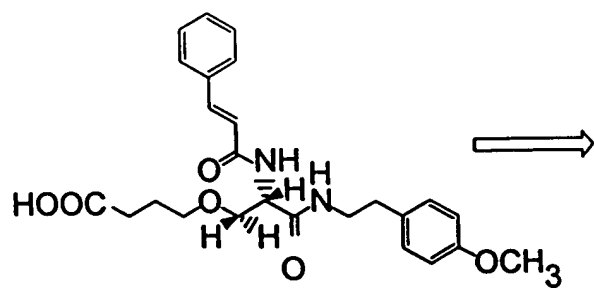
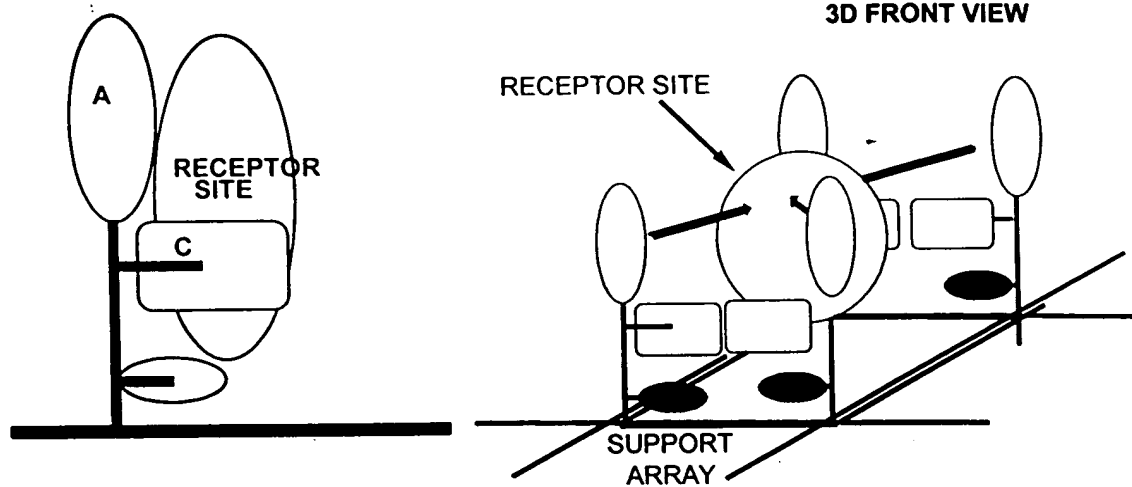


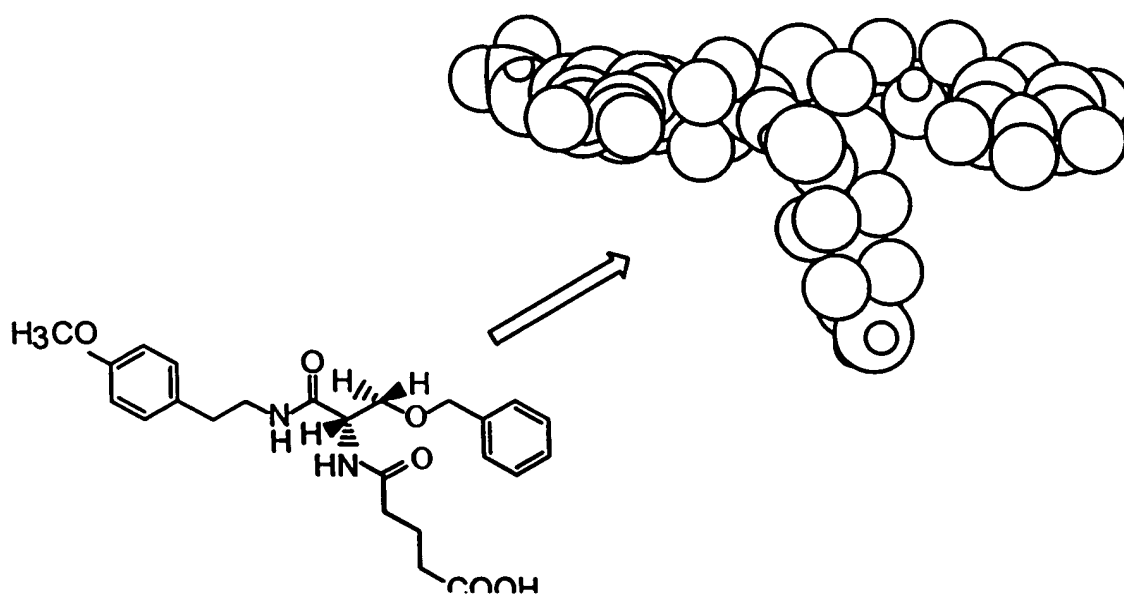
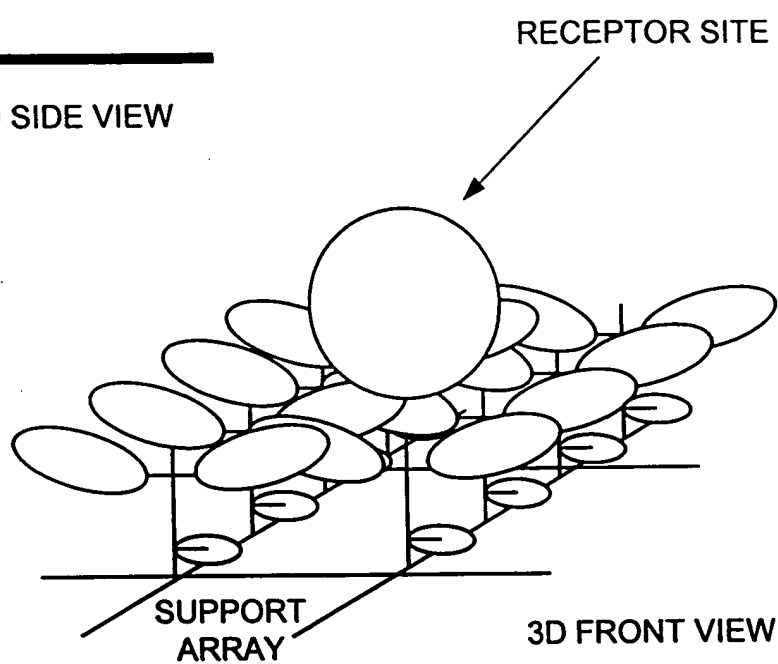
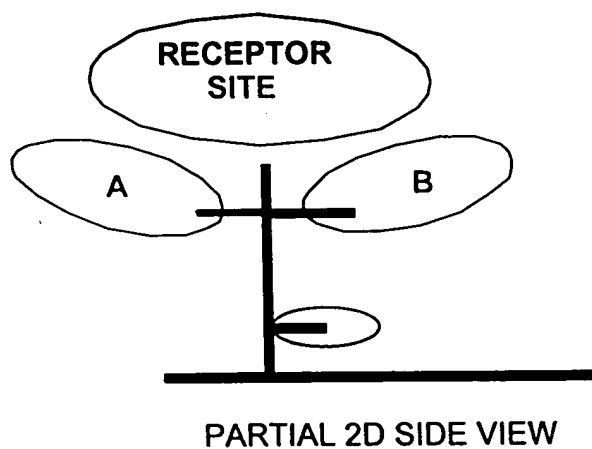
FIG. R



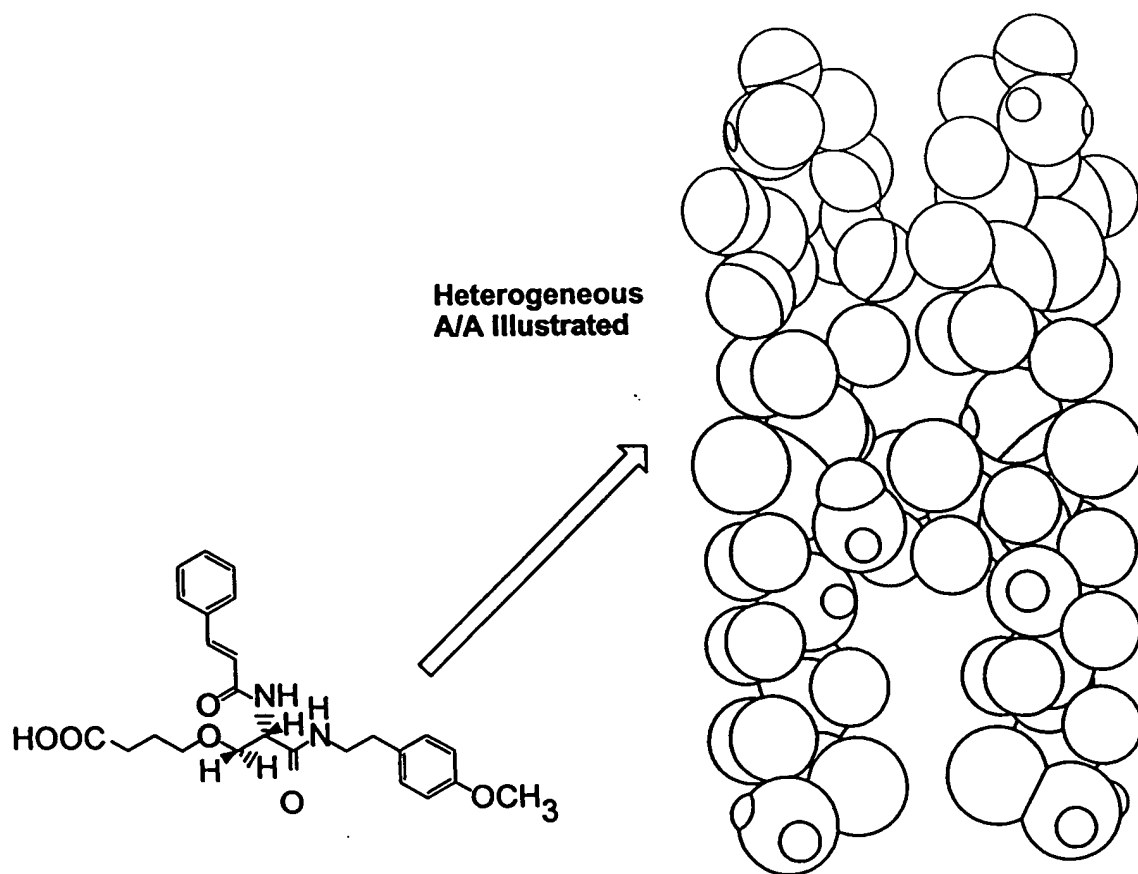
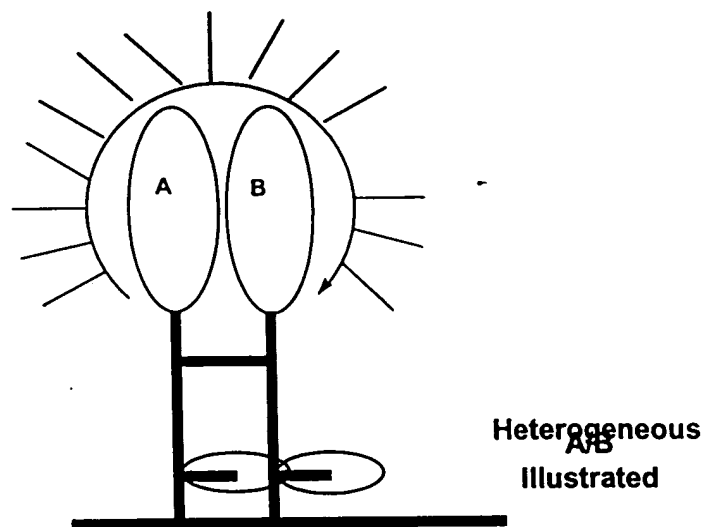
**FIG. 20**



**FIG. 2A**



**FIG. 22**



GenePix Pro 3.10.0  
Image: 23A.GR  
Wavelength: 532 nm  
Filter: 532 nm  
Gain: 1000  
Offset: 0  
Scale: 1.0  
Units: AU

FIGURE 23A GRAY SCALE IMAGE  
OF A 2 ug/ml r-PHYCOERYTHRIN  
CARA MICROARRAY.

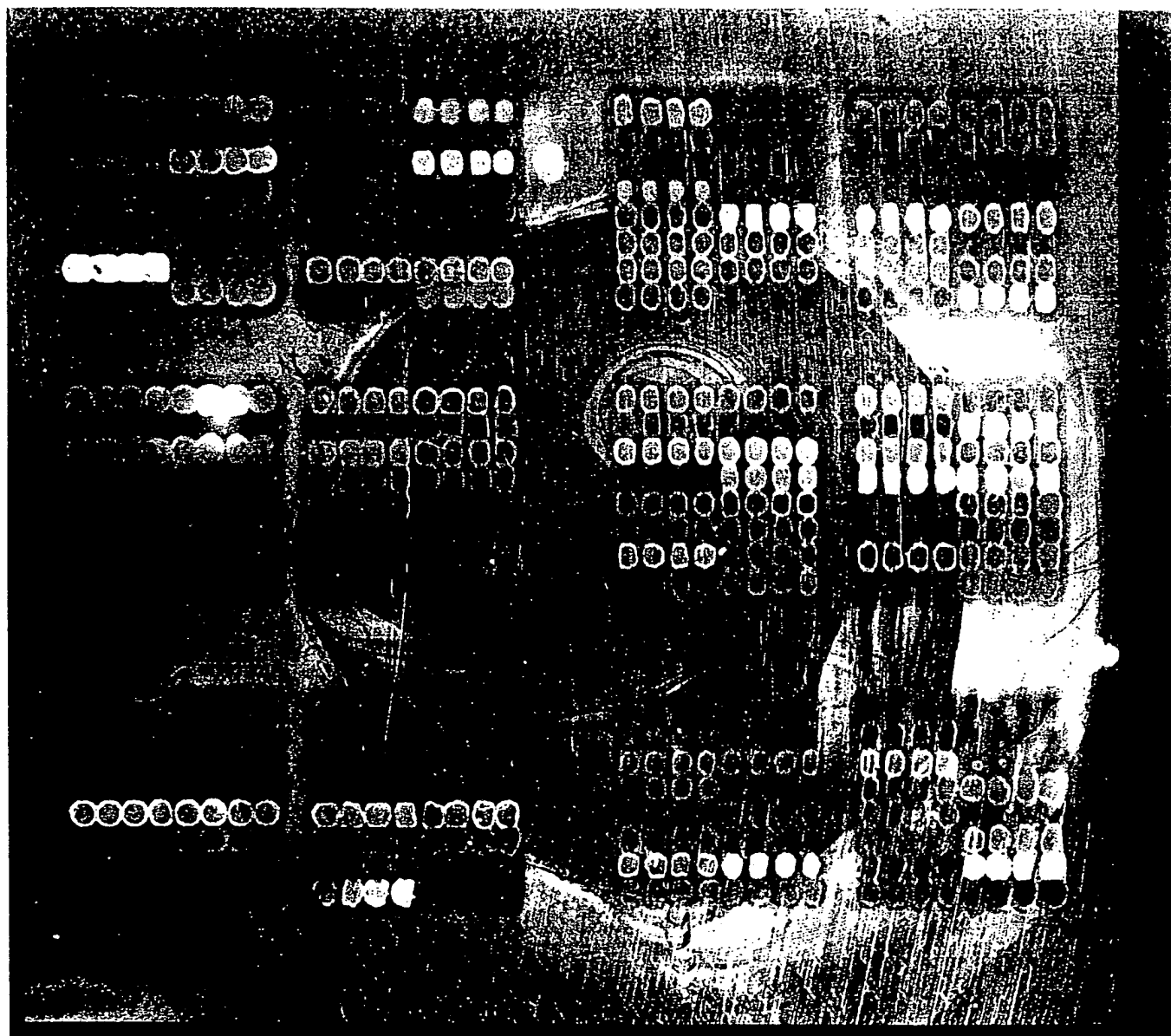


Fig. 24  
2D

plot R-PHYCOERYTHRIN

PHYCO

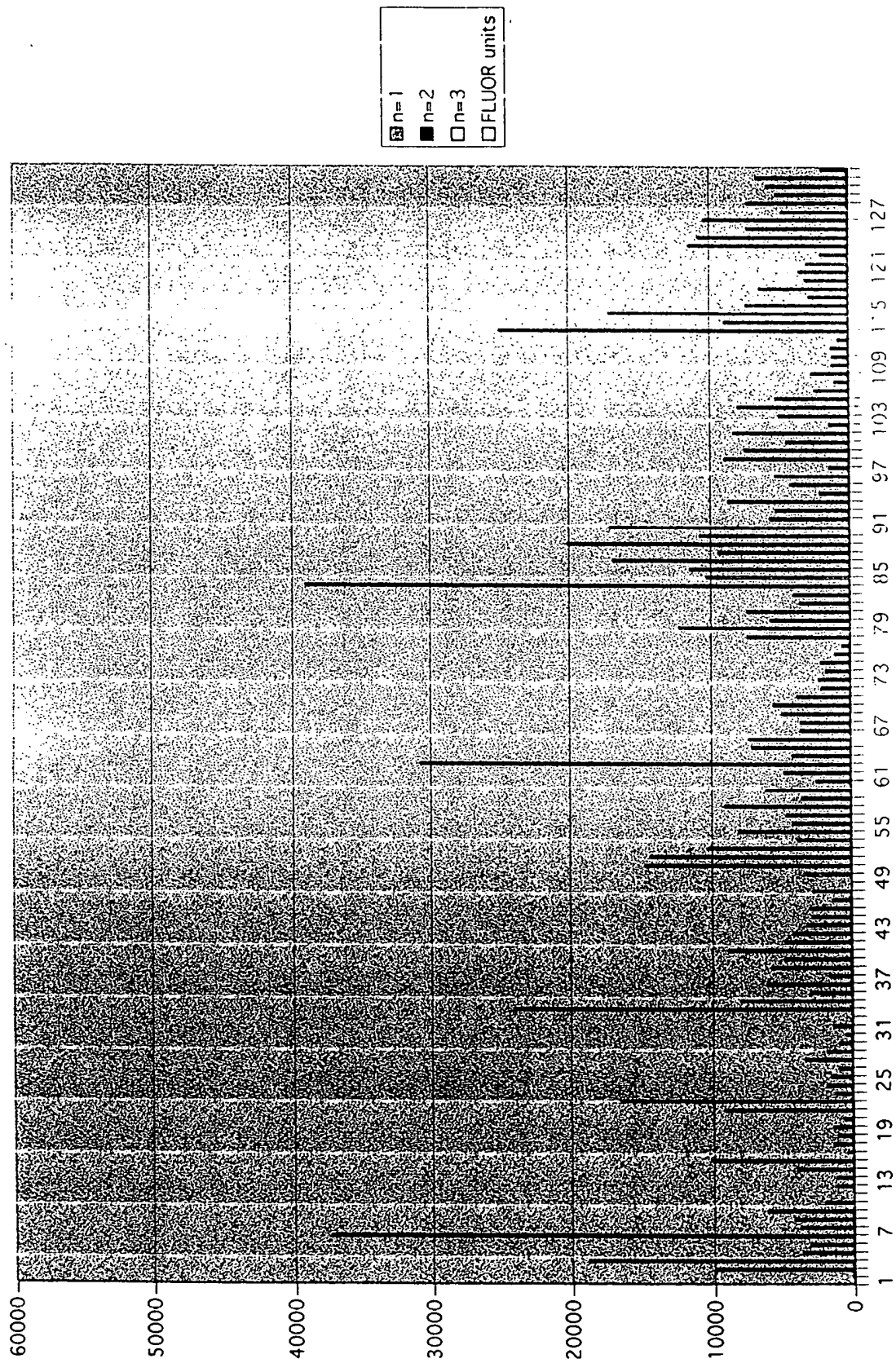


FIGURE 25

R-PHYCOPHYTIN

3D 1 Plot

N9 : PHYCO : n=1, n=2, n=3

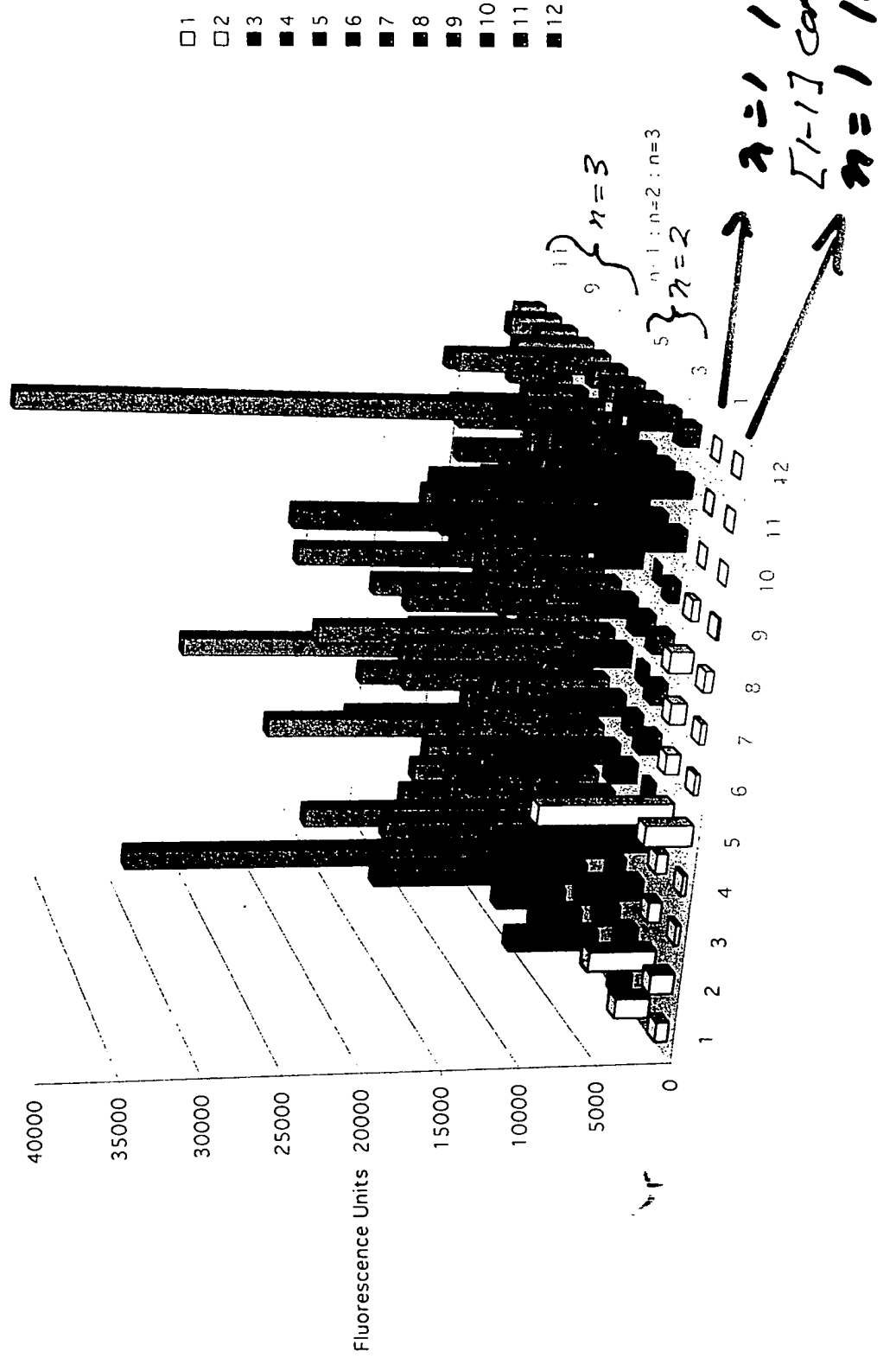


FIGURE 26

2D Plot

ORVAL BURN  
ORVAL1

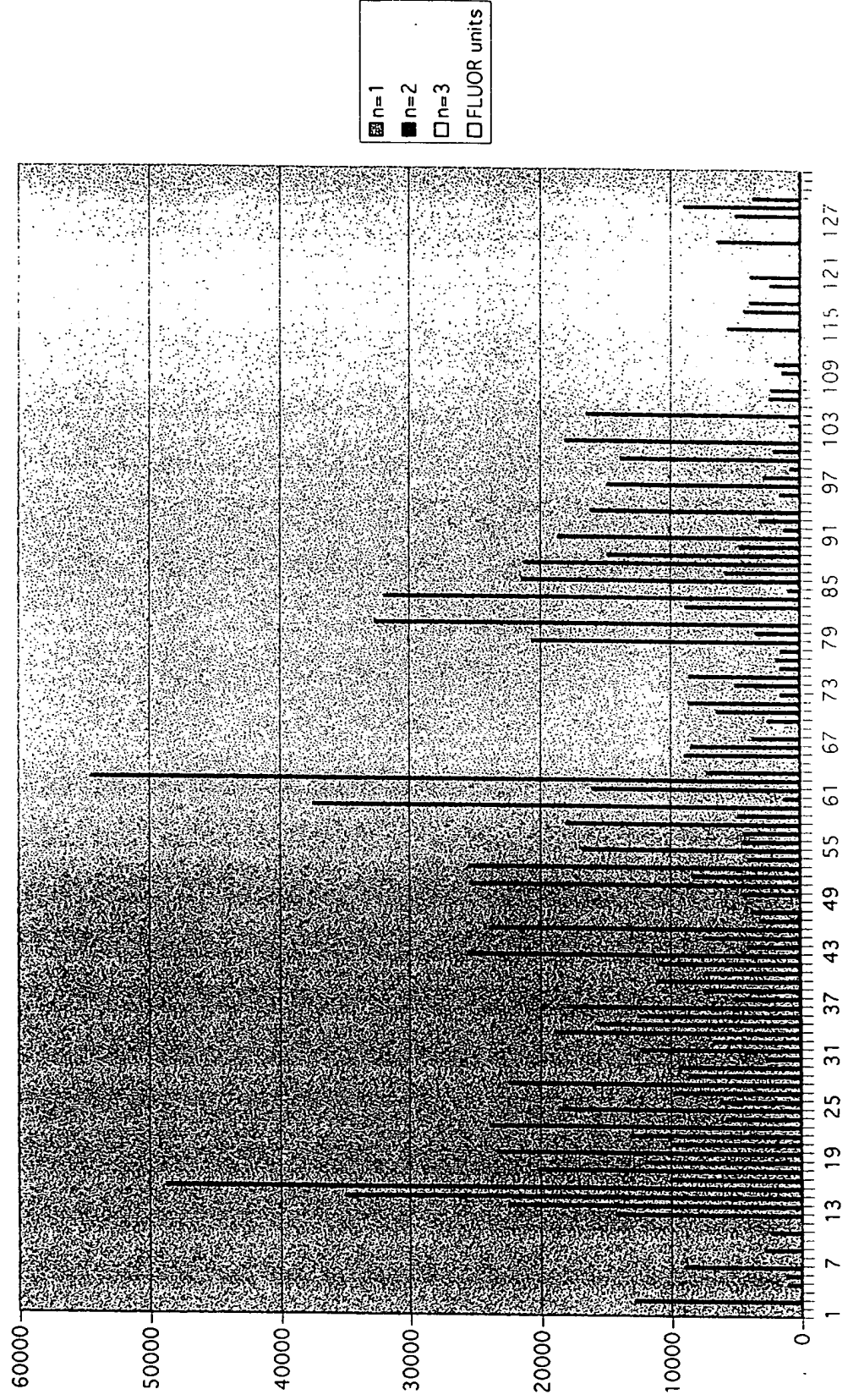


FIGURE 27

3D PLOT

ORVAL B4 MIN

N=9  $n=1, n=2, n=3$  COMBINATIONS OVAL 1

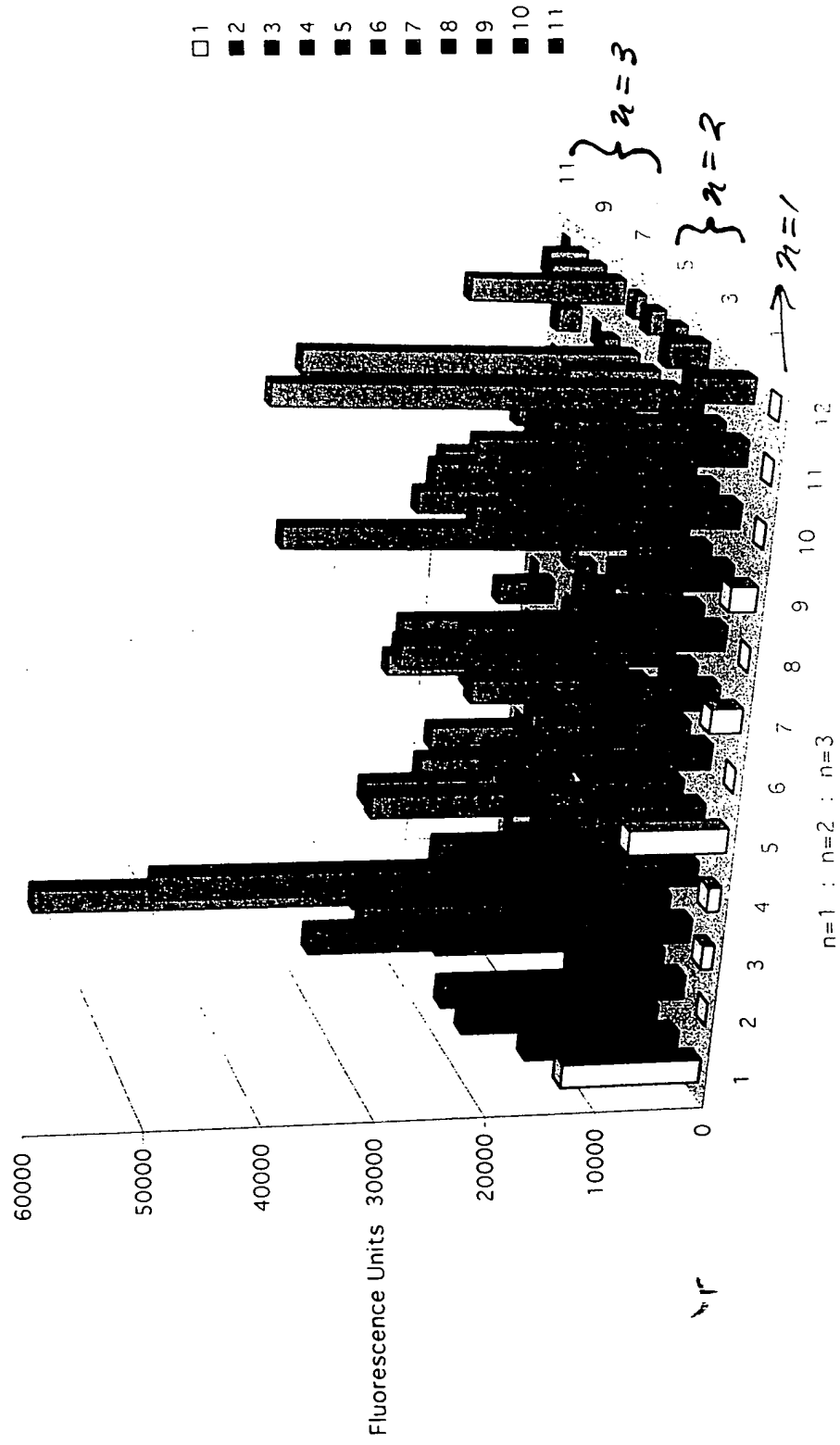


FIGURE 28 BOVINE SERUM ALBUMIN  
 2D plot RHO<sub>2</sub> - BSA

RHO<sub>1</sub> - BSA

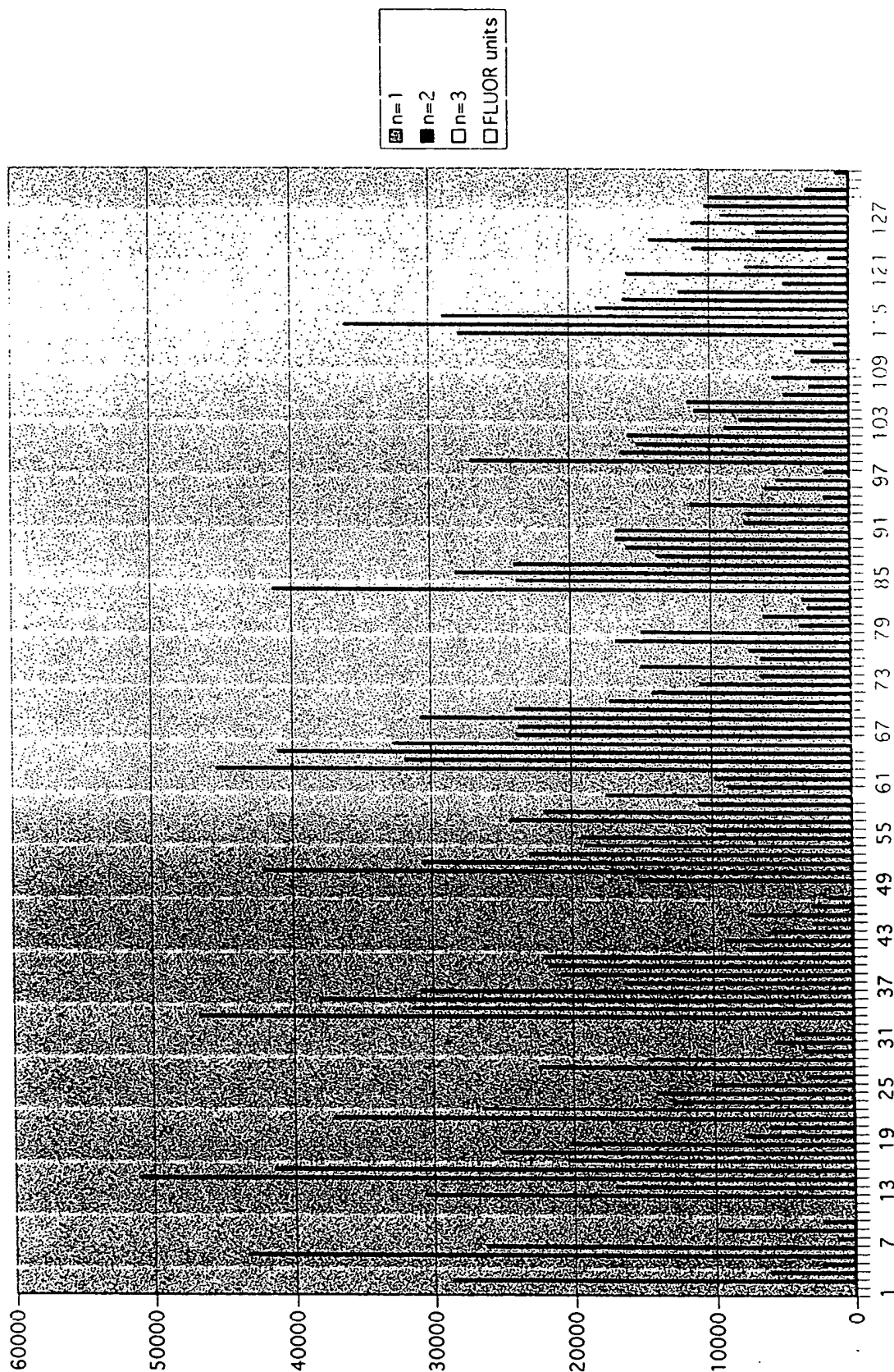


FIGURE 29

BSA

3D : Plot

N=9 n=1, n=2, n=3 COMBINATIONS RHO1-BSA/SA

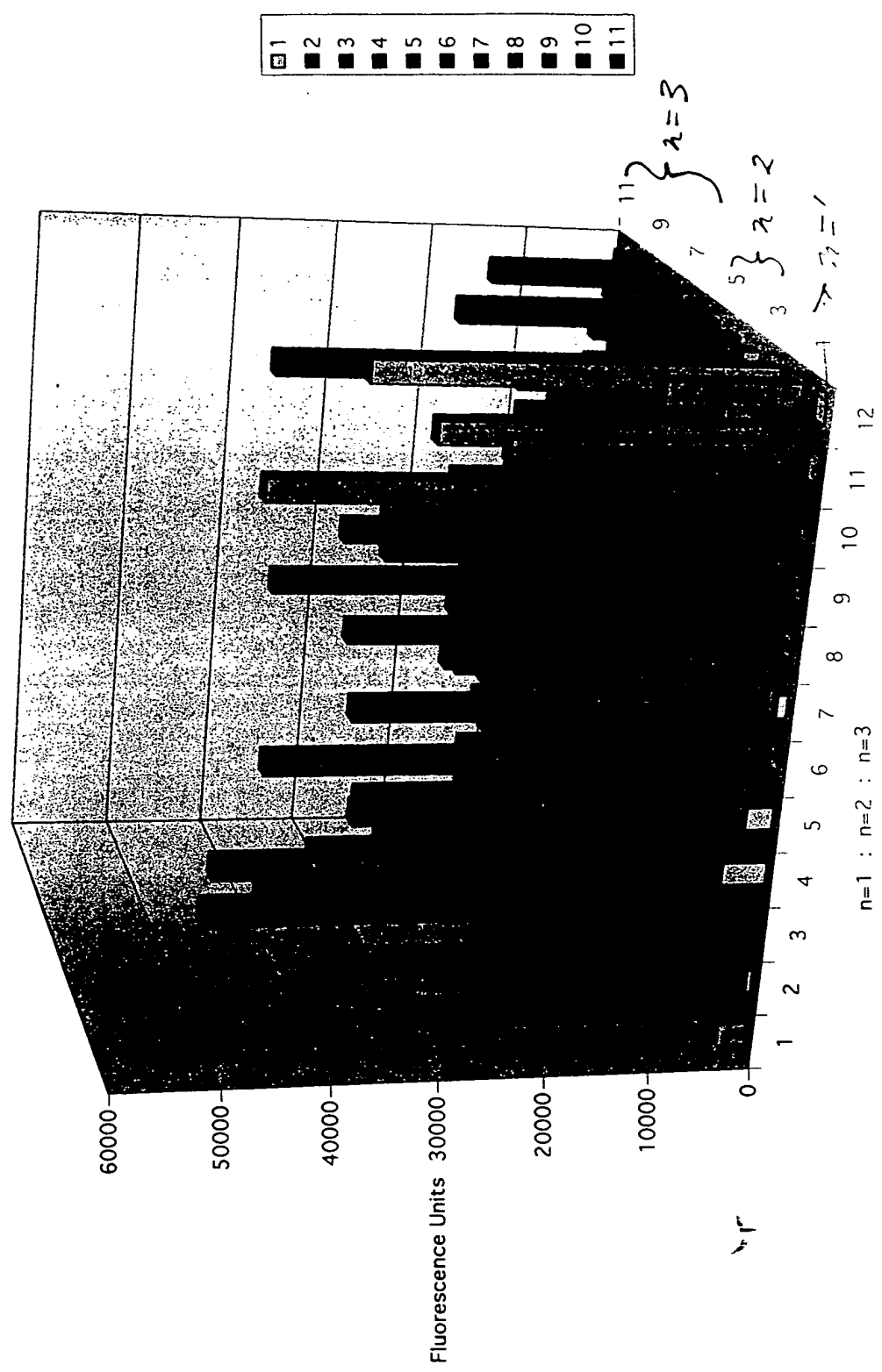


FIGURE 30  
2D Carbon Plot HARP-NH-Ac "1.0x"

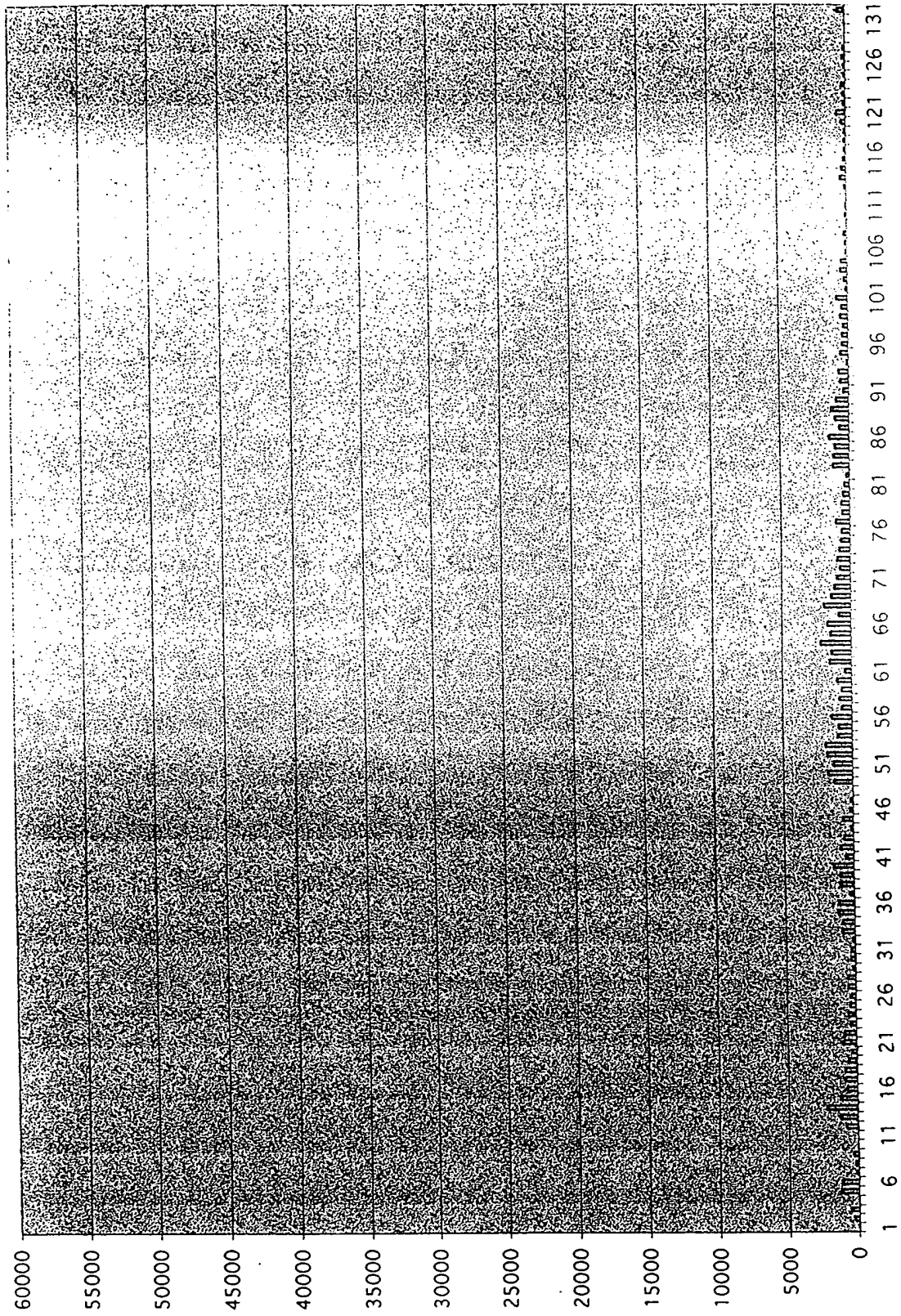


FIGURE 31

HRP-NH-Ac

3D PLOT

N=9 n=1, n=2, n=3 COMBINATIONS HRP-NH-Ac

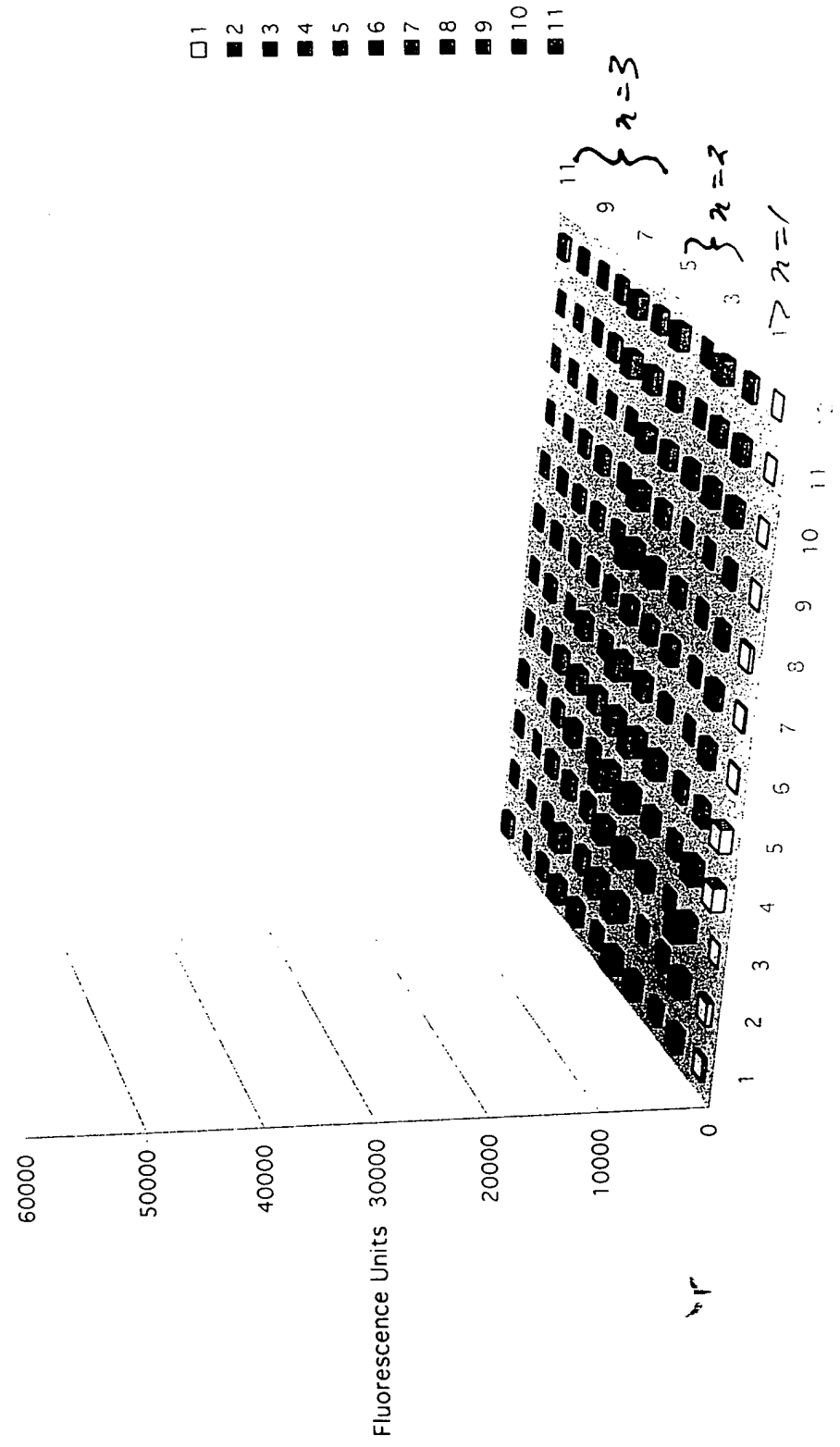


FIGURE 32  
2D PROT HRP-PCDD  
HRP-TCDD

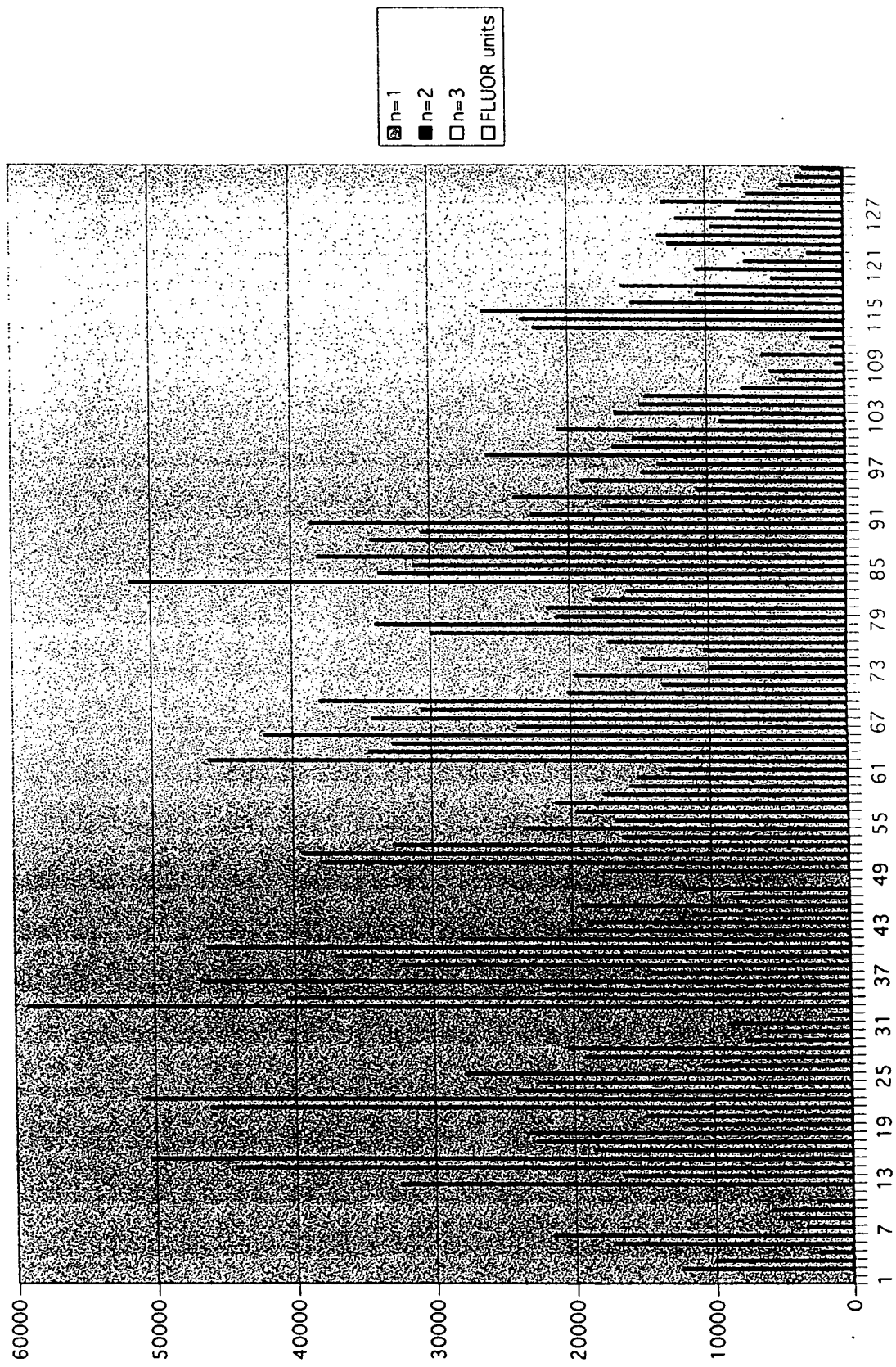


Figure 33

3D Plot

HRP-7cDD

N=9 n=1, n=2, n=3 COMBINATIONS HRP-PCDD

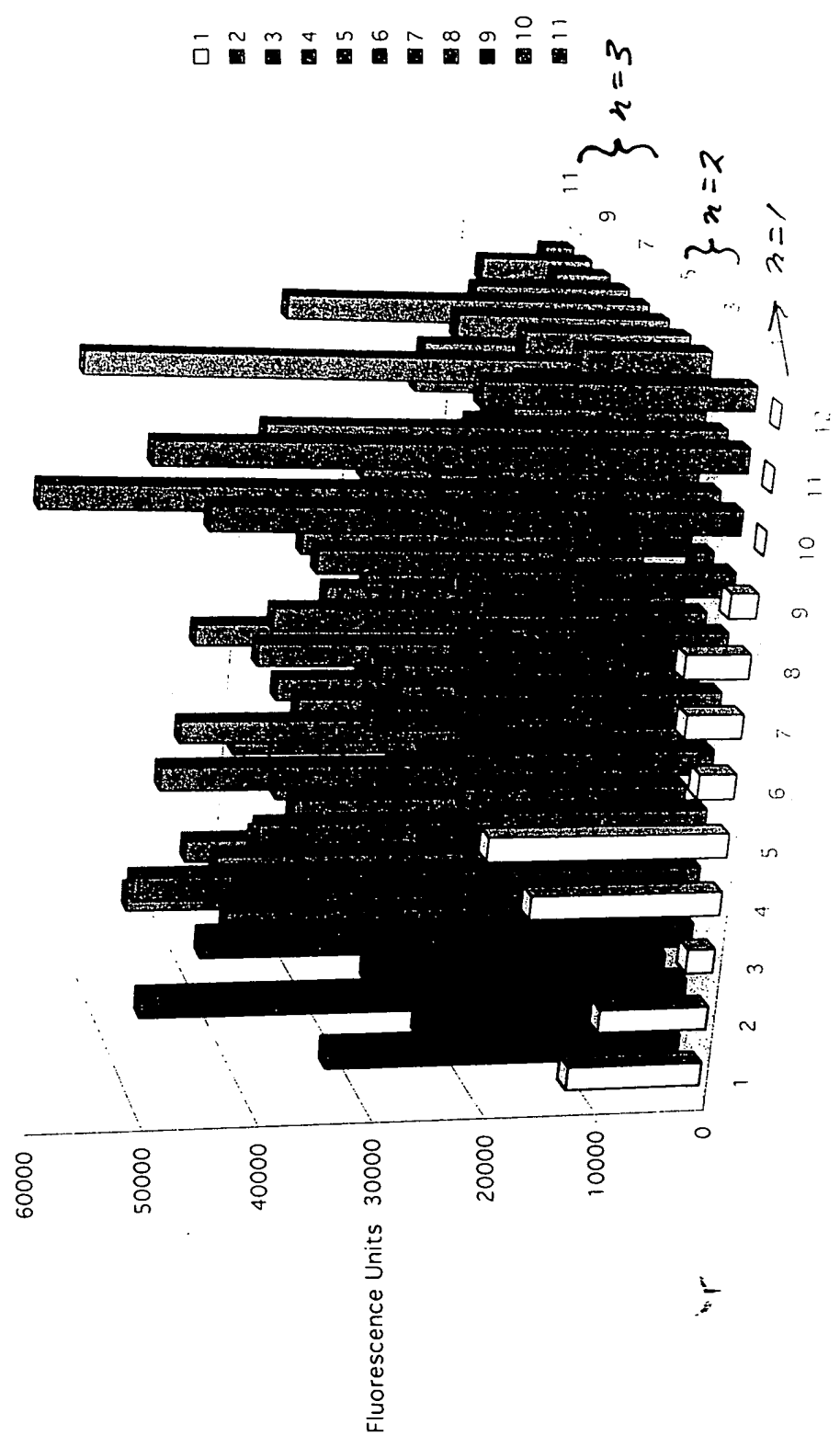


FIGURE 34 BLOCK 8 DATA PLOT.

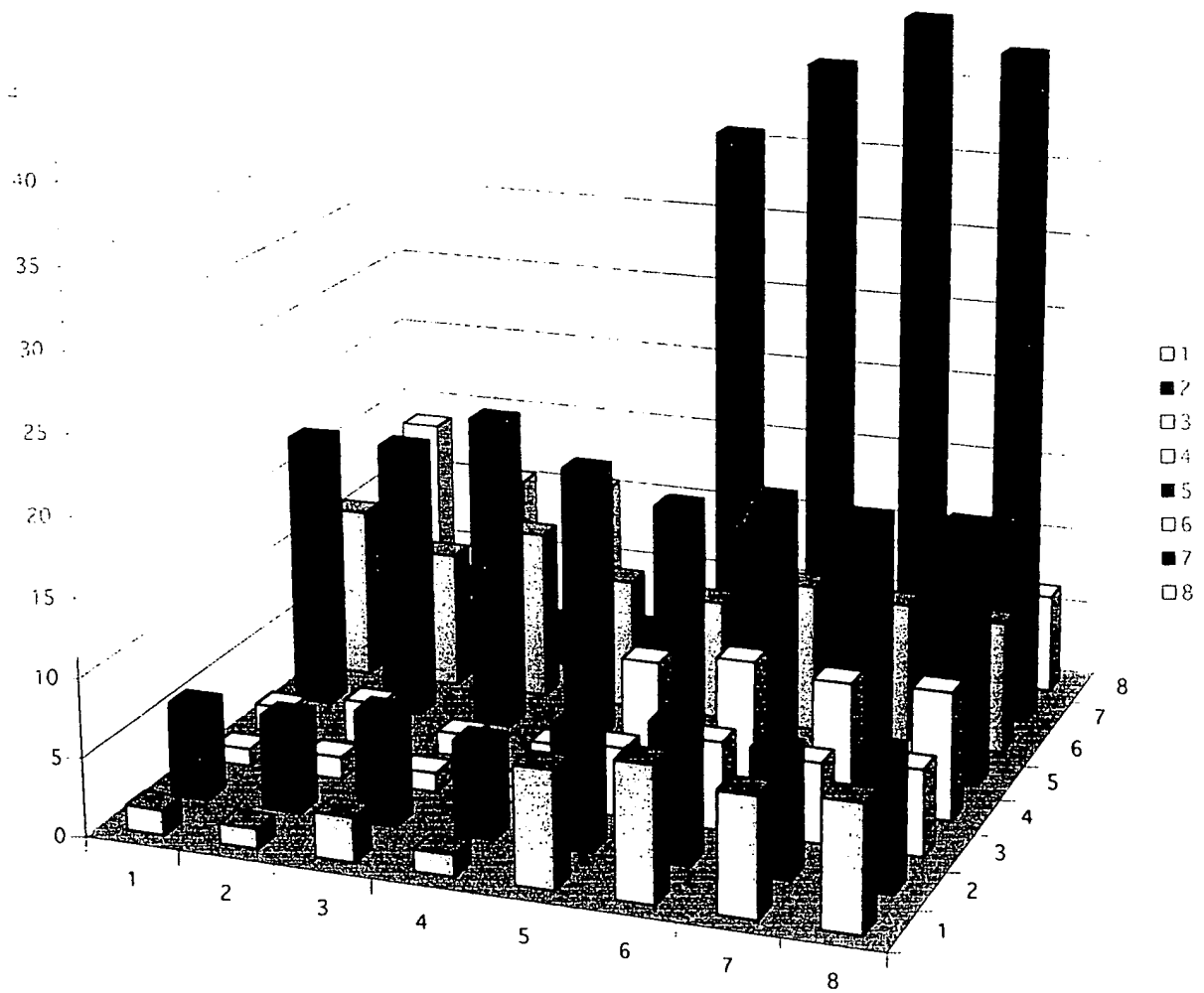
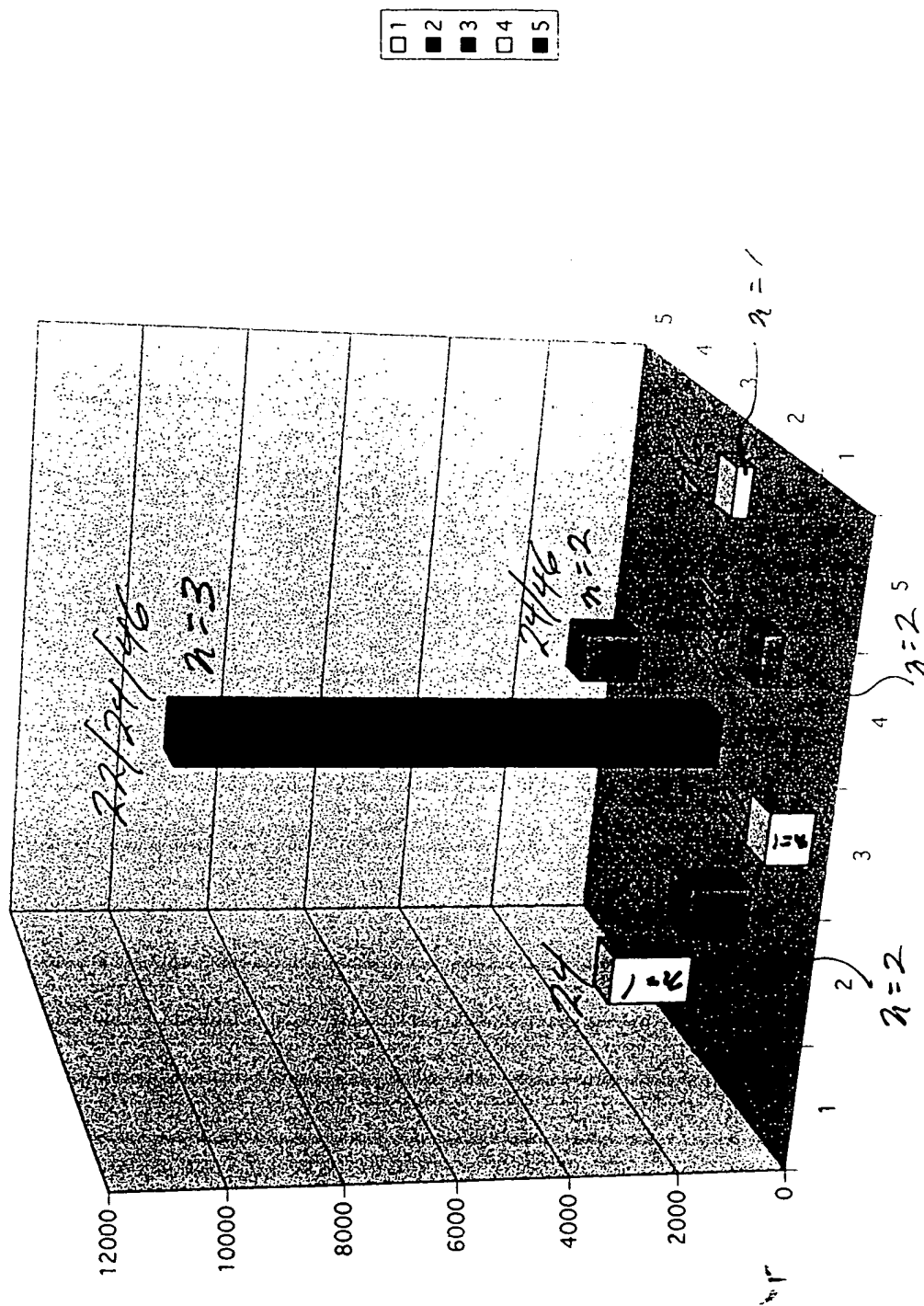


FIGURE 35 R-1420 DATED

25/11/22

### COMPARISON OF $n=1$ , $n=2$ , $n=3$

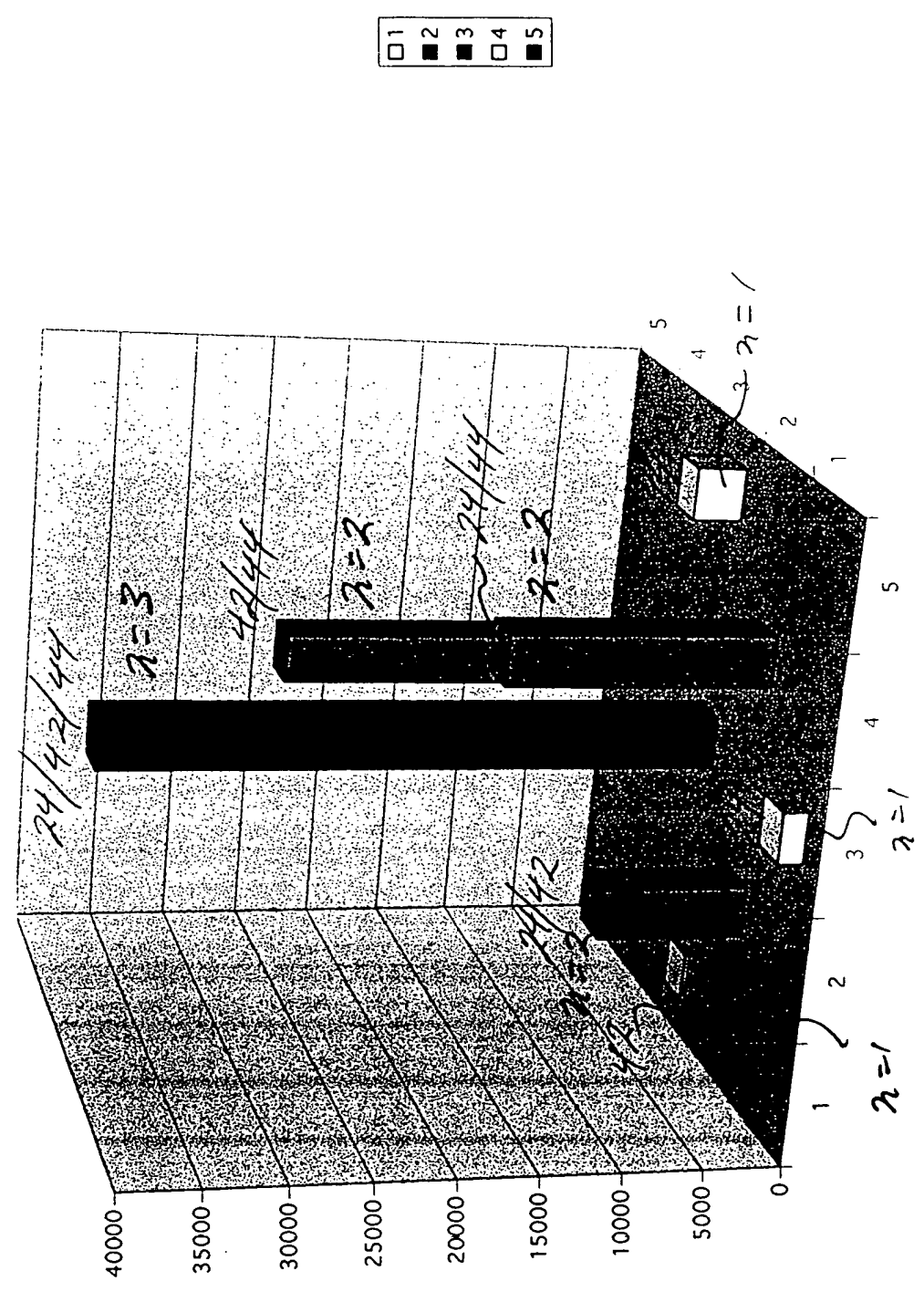


NOTE: "ZZ" REFERS TO [2-2], etc.

$\lambda = 3$   
 $24/42/44$

FIGURE 36 R-PHYCO DATA

COMPARISON OF  $n=1$ ,  $n=2$ ,  $n=3$

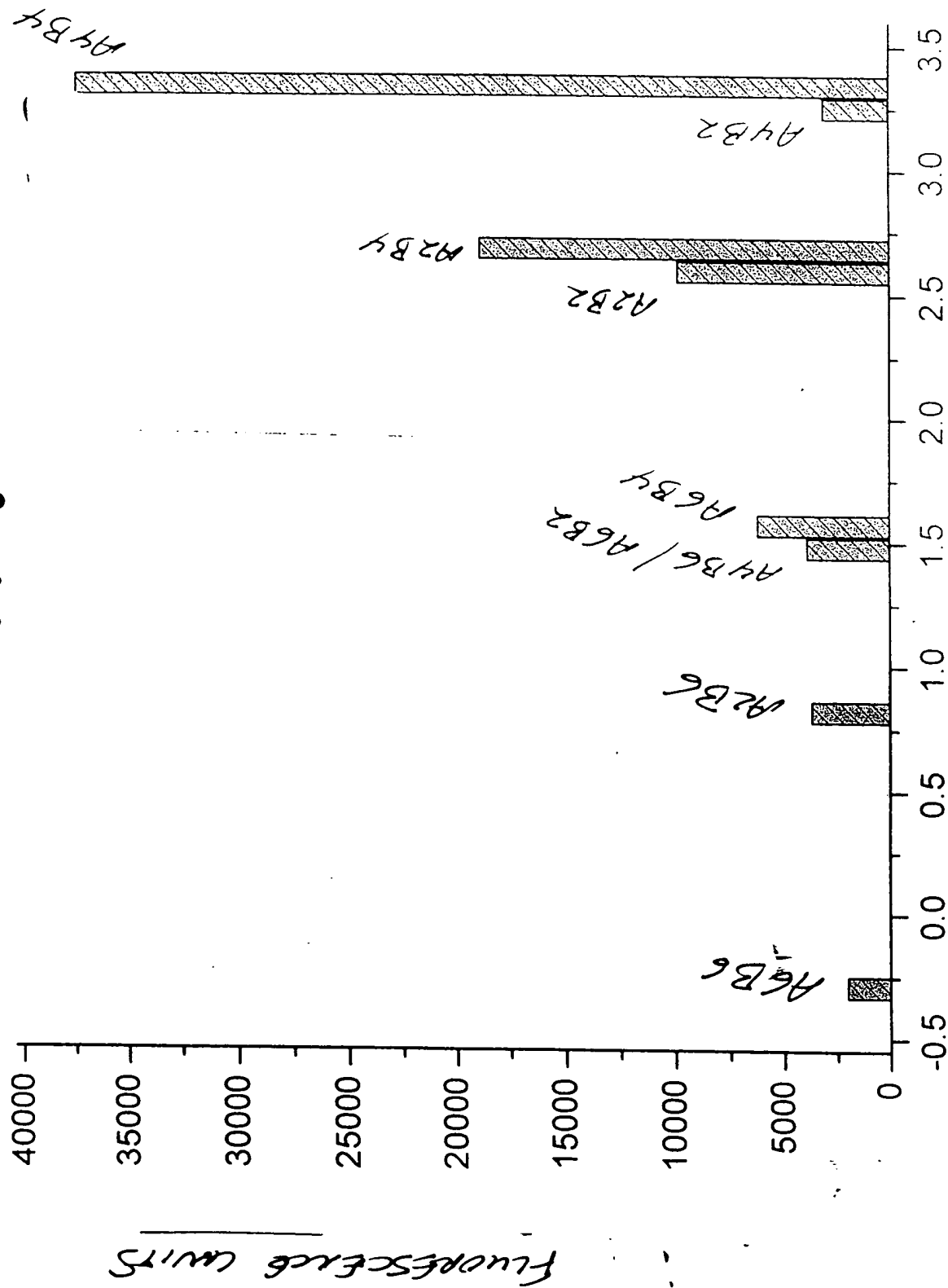


NOTE: "24" REFERS TO [2-4], etc.

FIGURE 37 LOG P VERSUS BINDING FOR  $n=1$  SYSTEMS.

B

$n=1: n=1$



LOG P

FIGURE 38 LOG P YEASUS BINDING

FOR n=2 SYSTEMS.

R-PHYCO

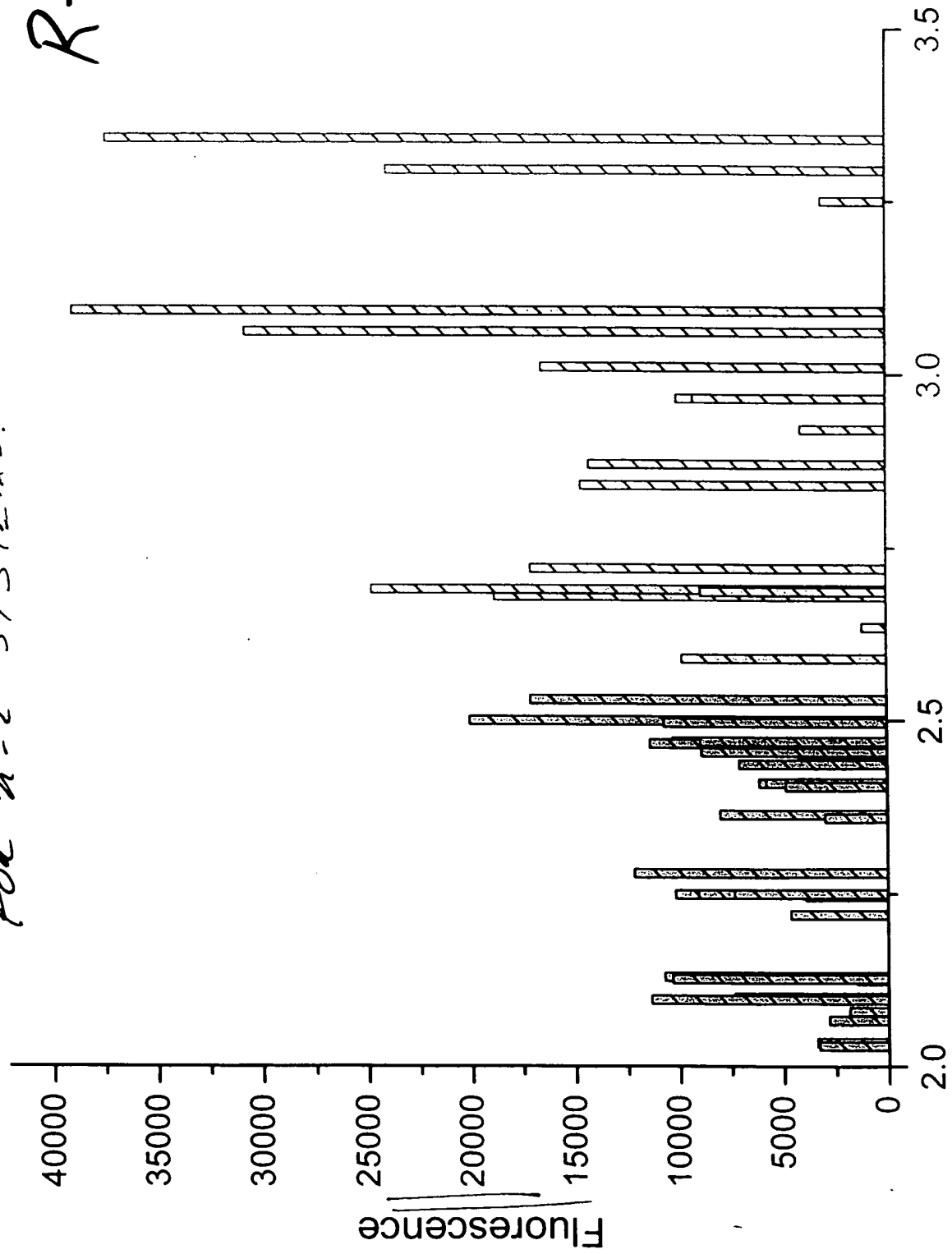


FIGURE 39 COMPARISON OF R-PHYCOCYANIN  
AND BSA BINDING.

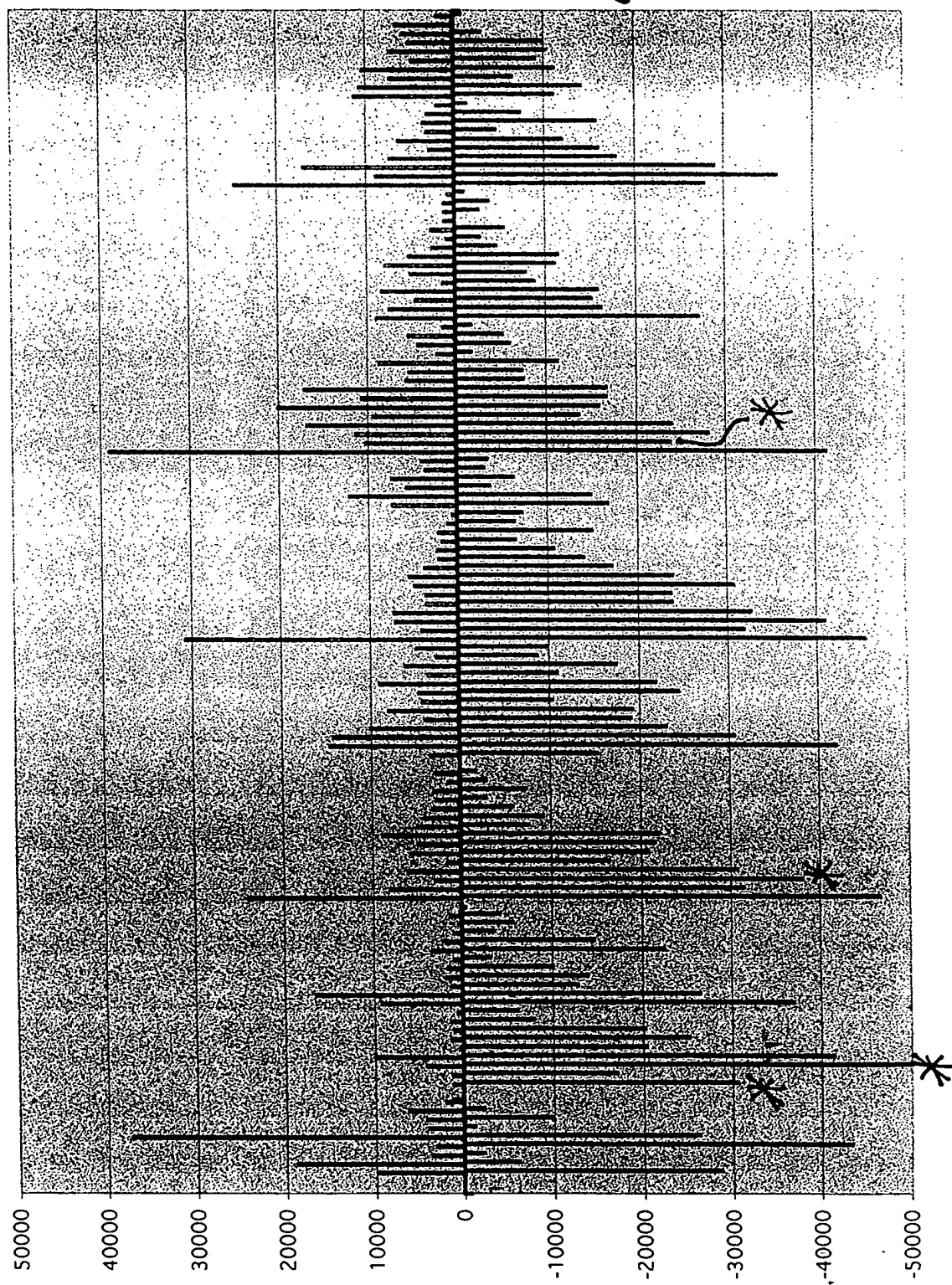
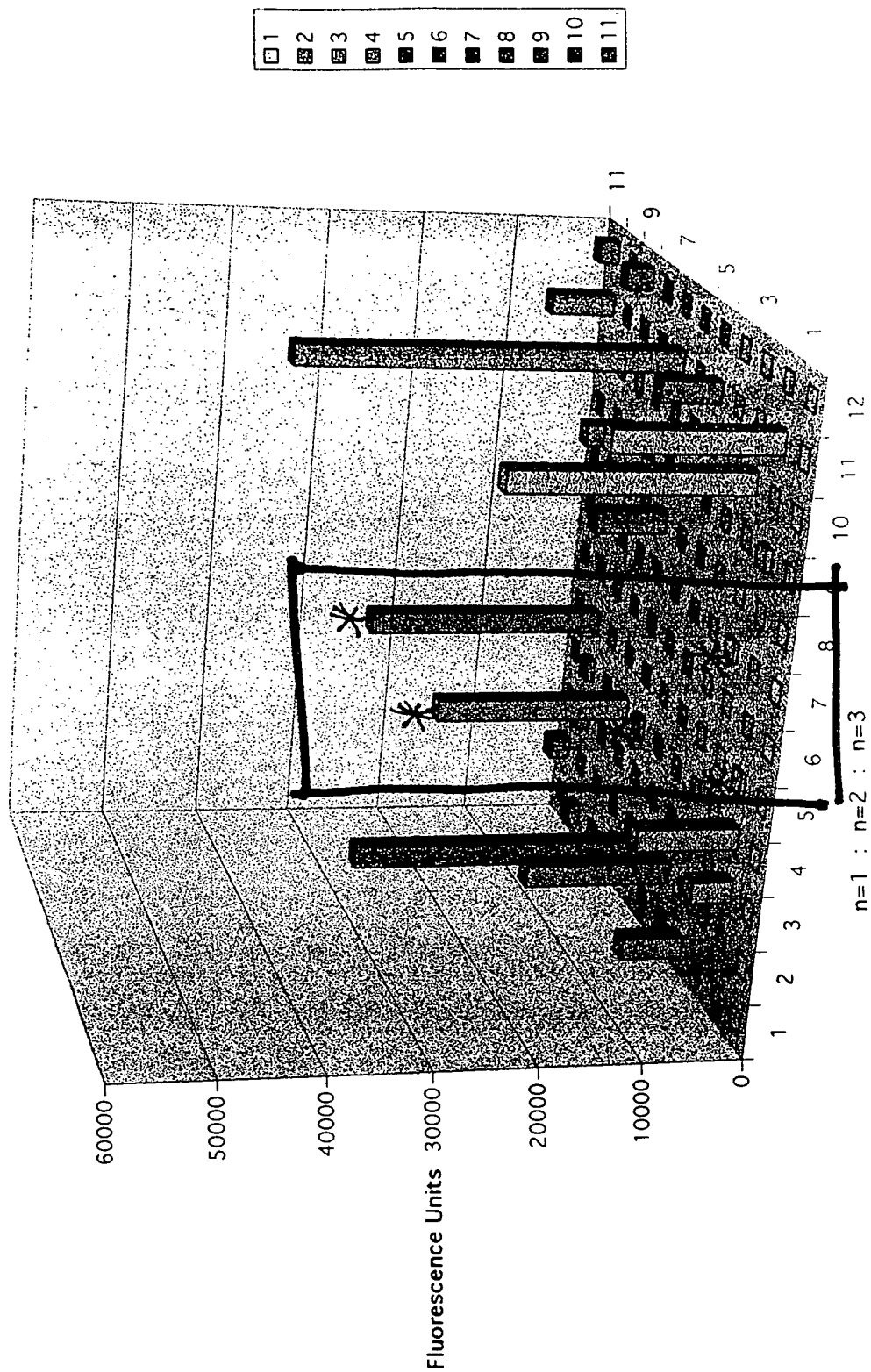


FIGURE 40 SELECTED BINDING: PHYCOERYTHRIN

N=9 n=1, n=2, n=3 COMBINATIONS r-PHYCO



BSA

FIGURE 41 SELECTED BINDING

N=9 n=1, n=2, n=3 COMBINATIONS BSA/bioterrorism

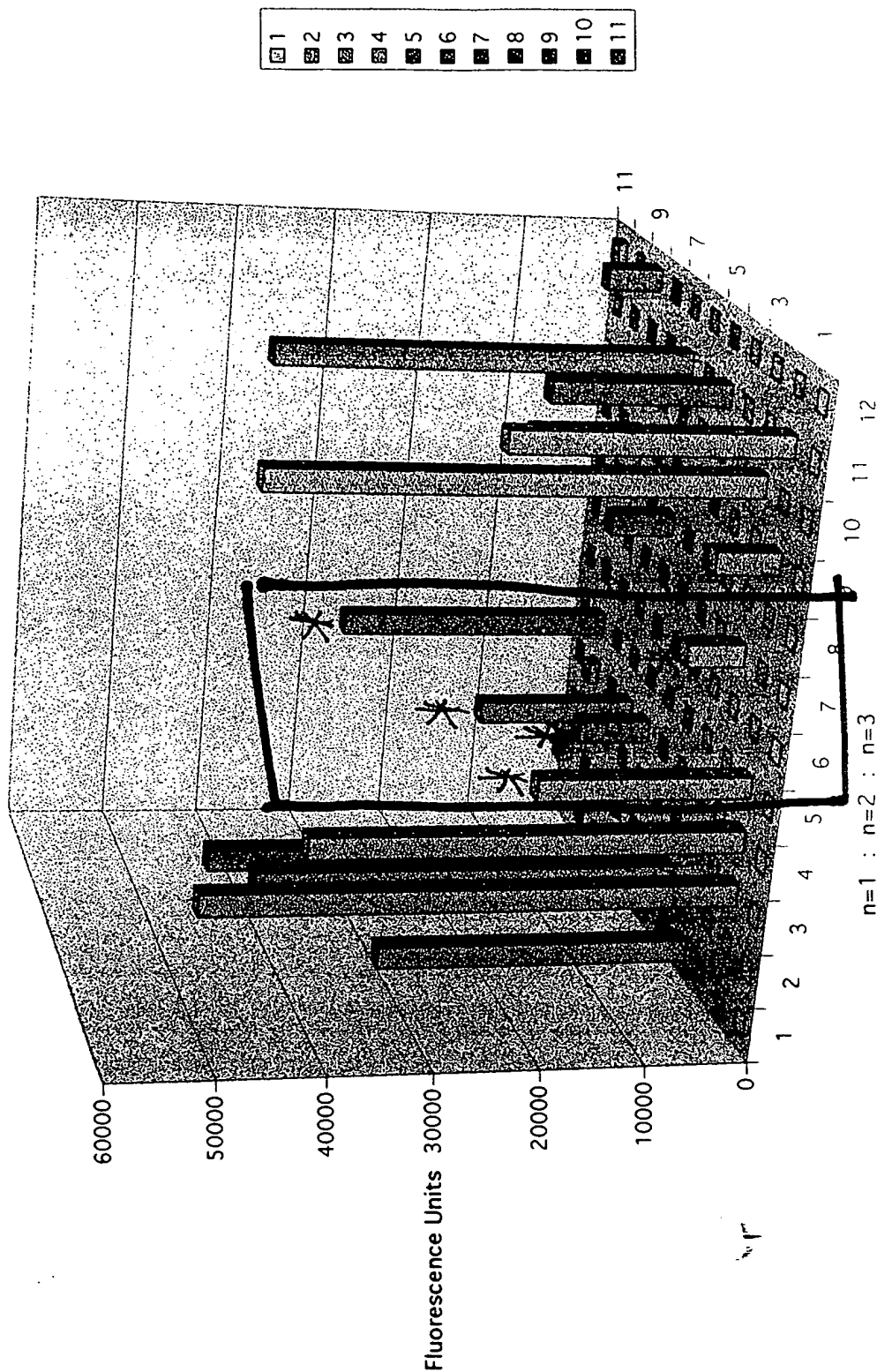
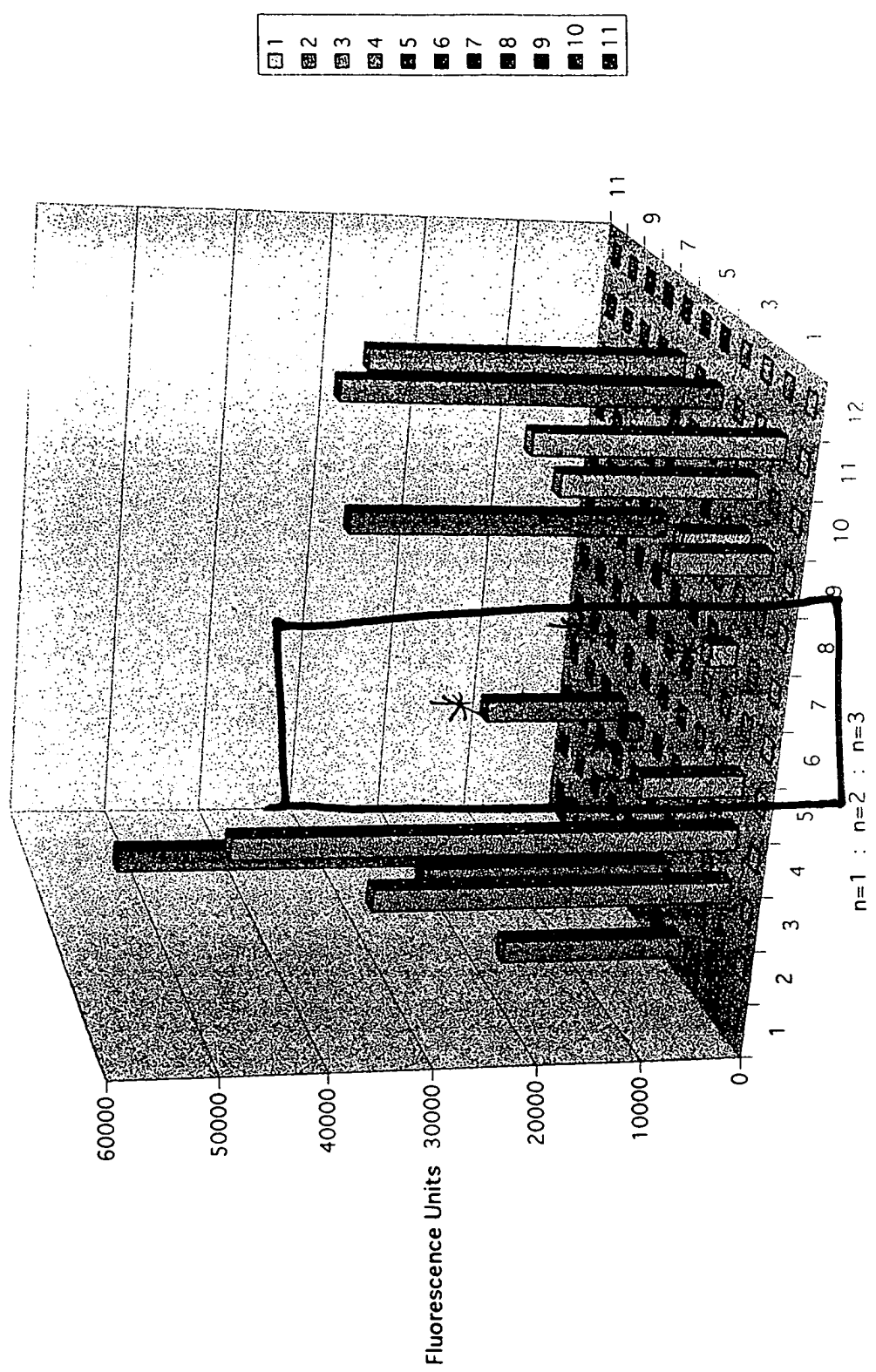


FIGURE 42 SELECTED BINDING: OVA BURN

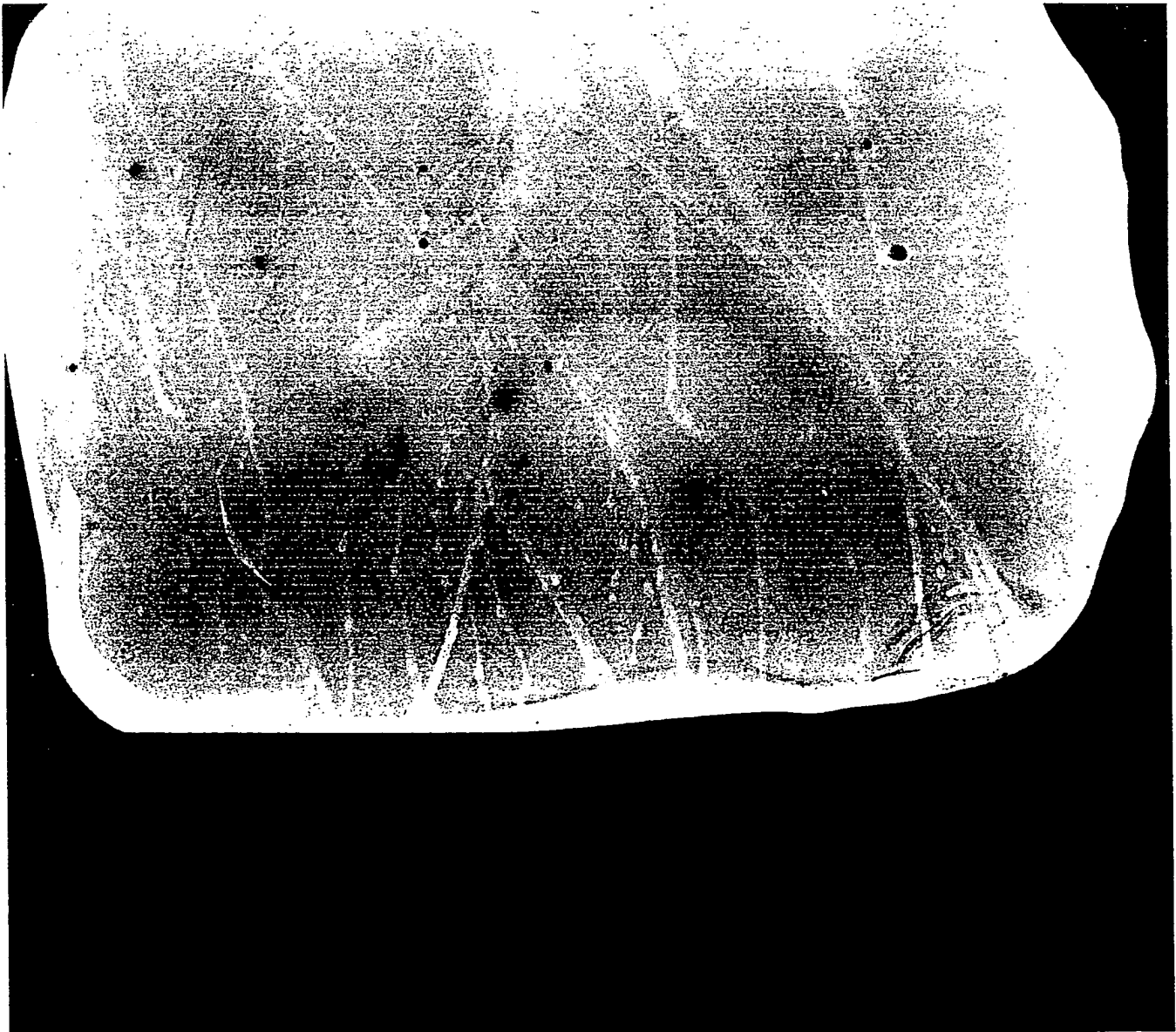
N=9 n=1, n=2, n=3 COMBINATIONS OVAL1/bioterrorism



GenePix Image - Wavelength 635

File name = 2004-03-29\_0860.tif  
Date = 2004/03/29 14:30:04  
Origin = 4, 0 pixels  
(0.04, 0 mm)  
Size = 2180 x 1368 pixels  
(21.8 x 13.68 mm)  
Scaling = 10  $\mu$ m/pixel  
Scanner = GenePix 4100A 01 (9249-1)  
No averaging.  
PMT Gain=6  
Laser Power=100  
Normalization Factor=1  
Filter=670LDF40  
Focus Position=0

Fig 43,000



GenePix Image - Wavelength 635

FIGURE

44

File name = 2004-03-29\_0854.tif  
Date = 2004/03/29 12:31:45  
Origin = 4, 0 pixels  
(0.04, 0 mm)  
Size = 2180 x 1068 pixels  
(21.8 x 10.68 mm)  
Scaling = 10 um/pixel  
Scanner = GenePix 4100A 01 [9]  
No averaging.  
EMT Gain=...  
Laser Power=...  
Normalization Factor=1  
Filter=6711F40  
Focus Position=0

bg = 42,000



GenePix Image - Wavelength 635

FIGURE

45

File name = 2004-03-29\_0861.tif  
Date = 2004/03/29 15:40:20  
Origin = 4, 0 pixels  
(0.04, 0 mm)  
Size = 2180 x 1368 pixels  
(21.8 x 13.68 mm)  
Scaling = 10  $\mu$ m/pixel  
Scanner = GenePix 4100A 1 [Genix]  
N averaging  
LMT Gain=70  
Laser Power=100  
Normalization Factor=1  
Filter=670DF40  
Focus Position=0



2004/03/29 16:27:10

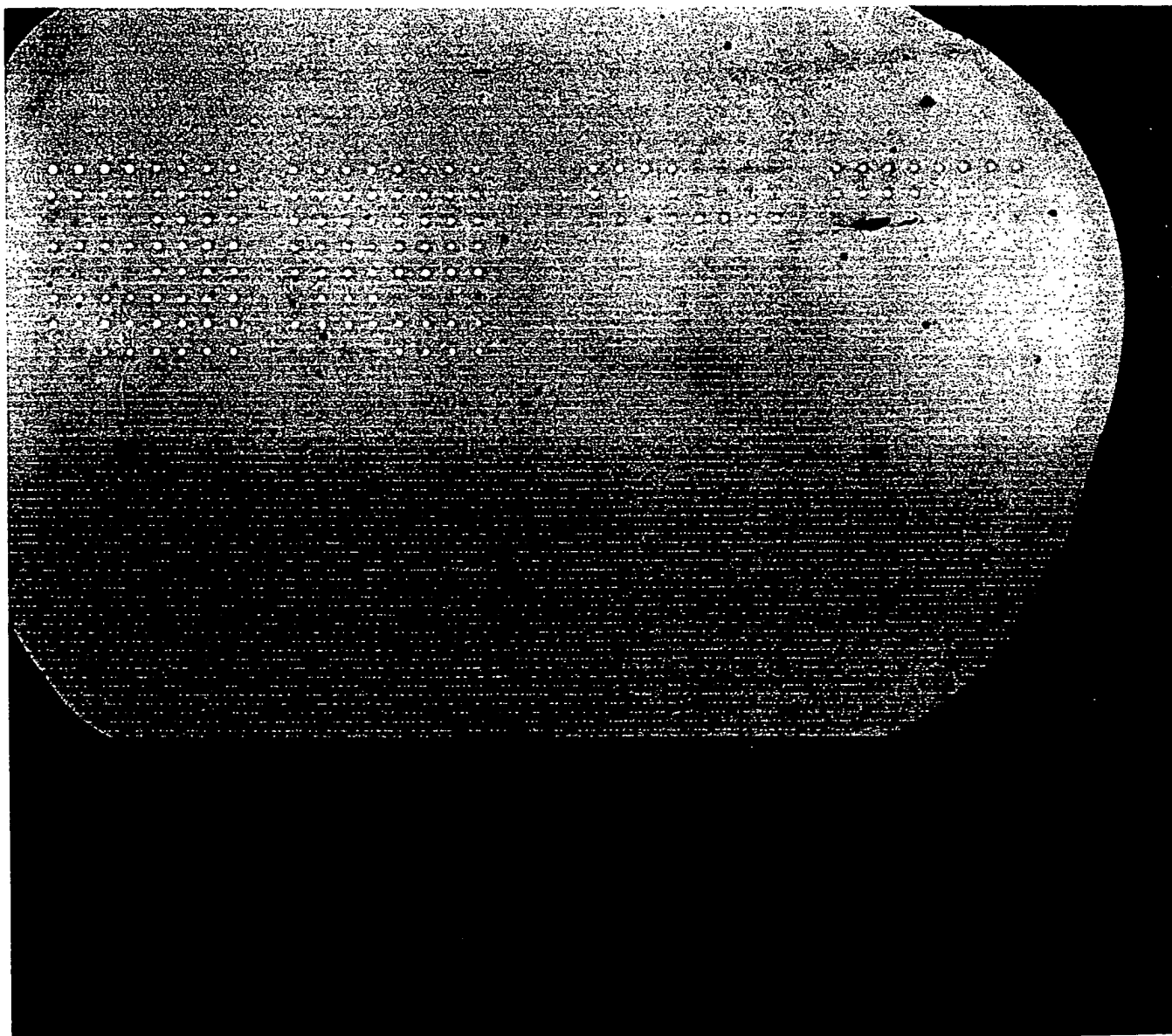
GenePix Image - Wavelength 635

FIGURE  
46

File name = 2004-03-29\_0863.tif  
Date = 2004/03/29 15:48:56  
Origin = 4, 0 pixels  
(0.04, 0 mm)  
Size = 2180 x 1368 pixels  
(21.8 x 13.68 mm)  
Scaling = 10  $\mu$ m/pixel  
Scanner = GenePix 4100A v. 1.2.2 (92690)  
No averaging.  
EMT Gain=560  
Laser Power=100  
Normalization Factor=1  
Filter=670DF40  
Focus Position=0

by: 38,000

high: 28,000

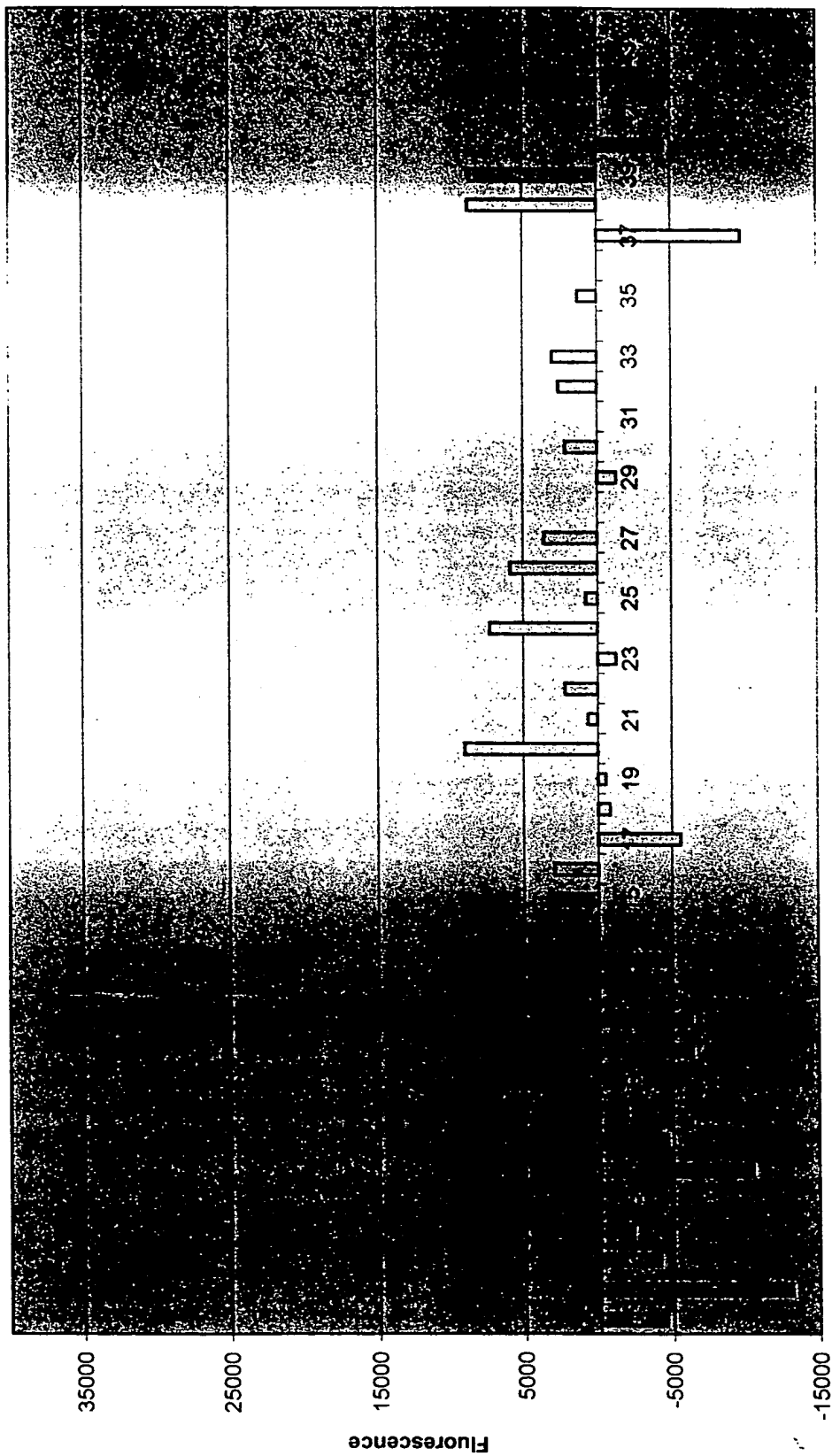


2004/03/29 16:55:30

99-53-6 | 03/29

FIGURE 47

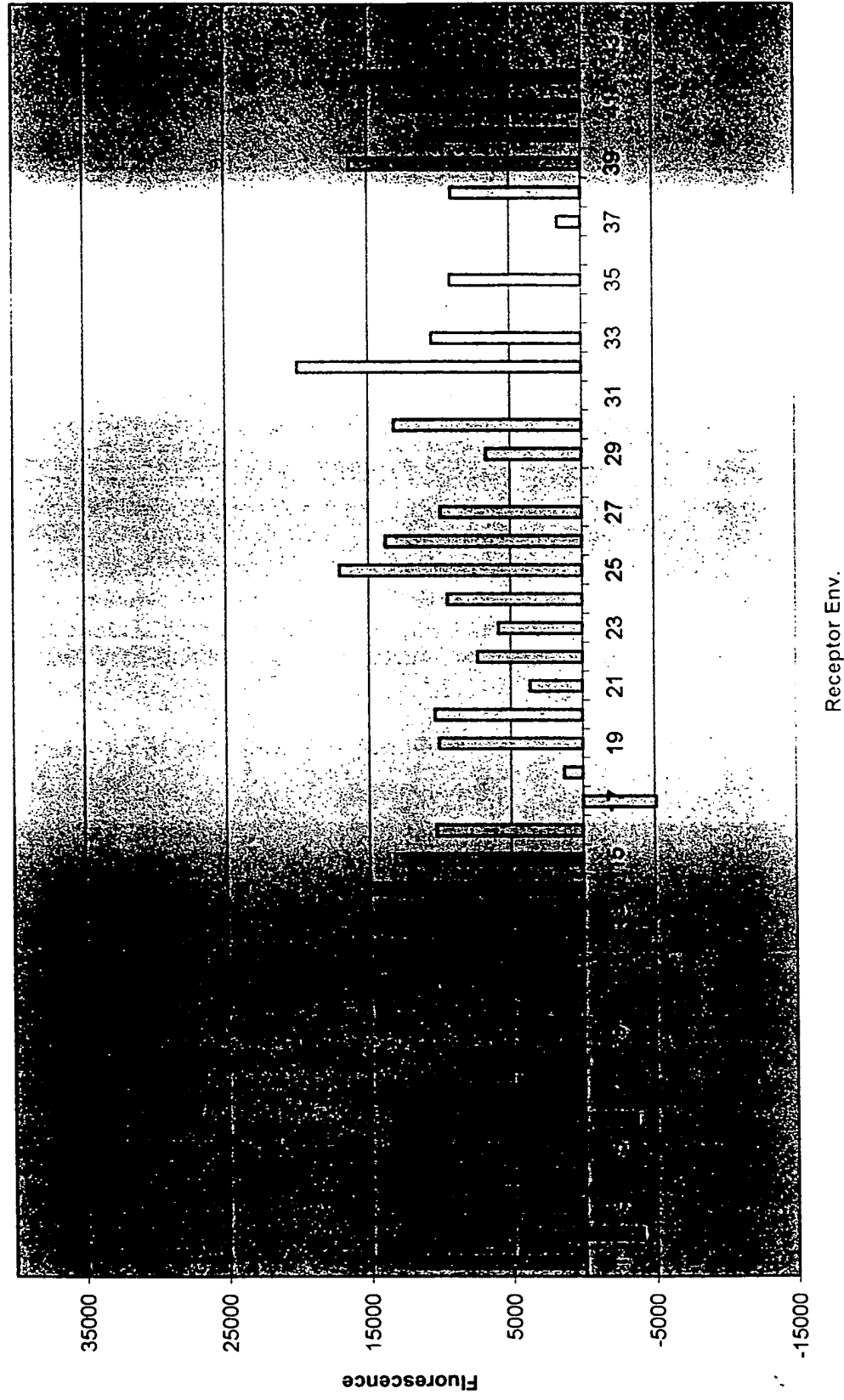
CARA DYNAMIC C18 / B.C. 1.0 CHO3 3C (N9n2, img 03-29-0861, PMT 600)



99-52-4 03/29

FIGURE 48

CARA DYNAMIC C18/B.C. 1.0 CHO3 23C (N9n2, img 03-29-0854, PMT 600)

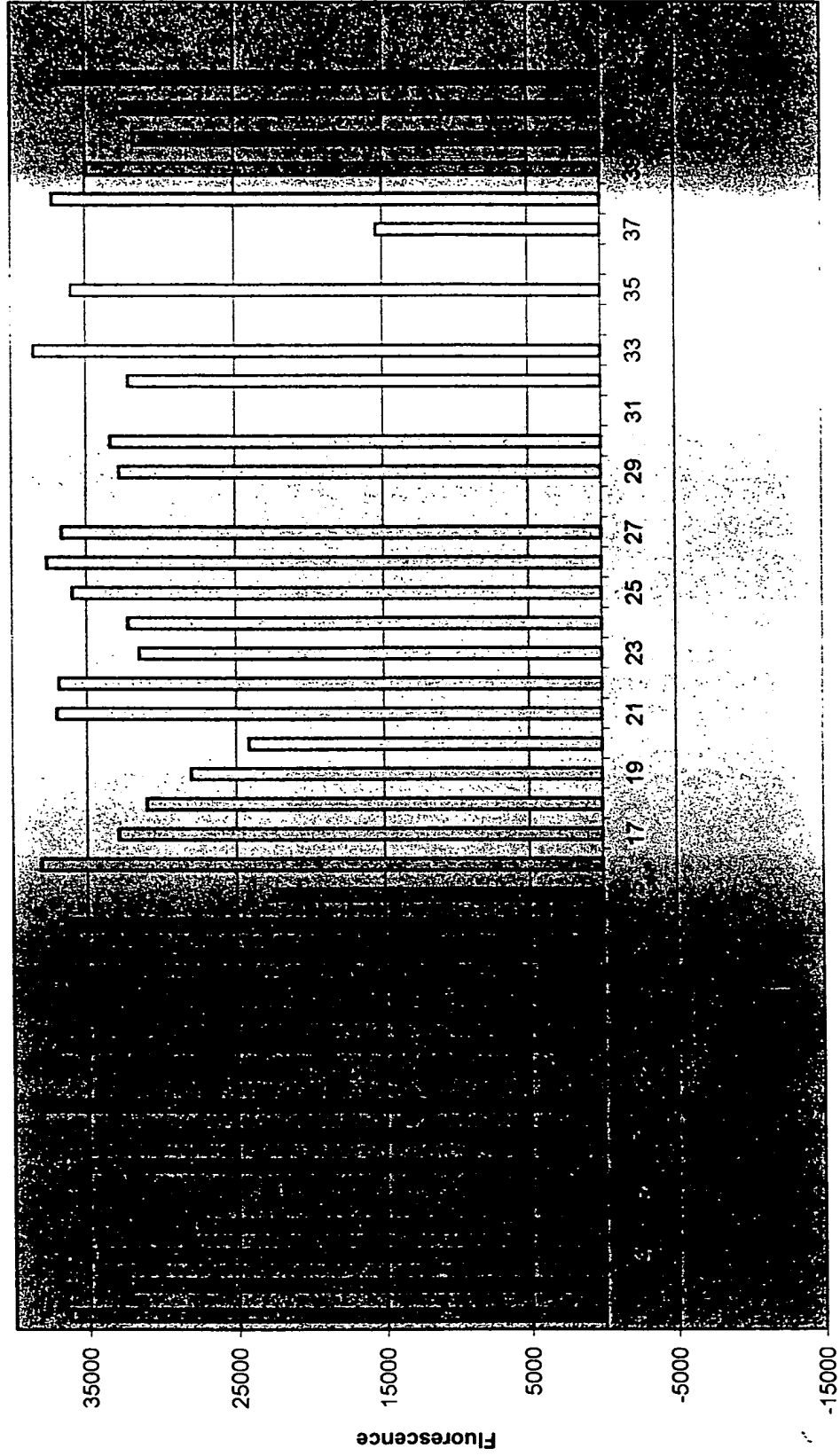


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99-53-7 03/29

Figure 49

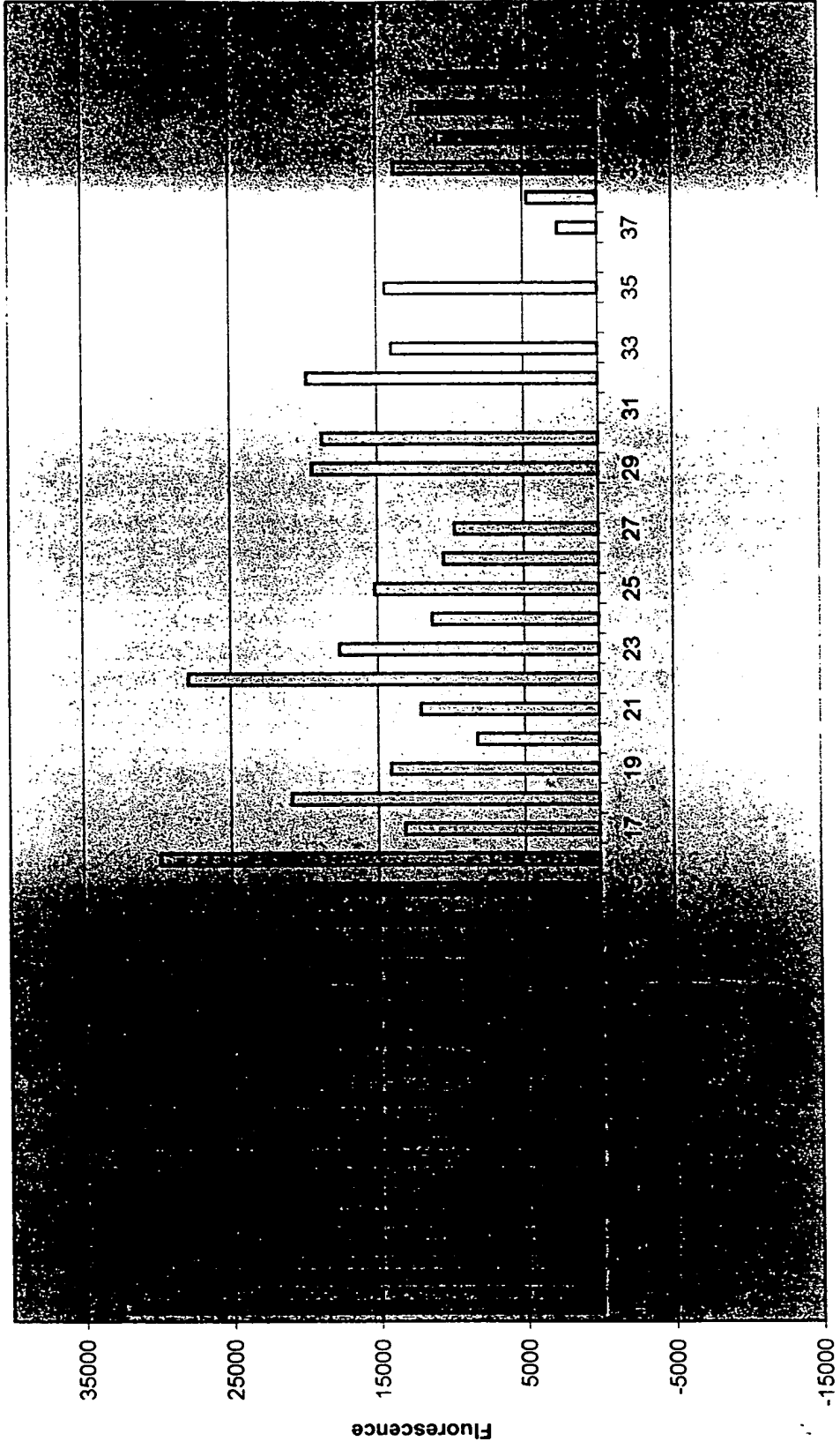
CARA DYNAMIC C18 / B.C. 1.0 CHO3 43C (N9n2, img 03-29-0863, PMT 560)



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Figure 50  
STATT

CARA STATIC 1.0 CHO2 23C (N9n2, img 10-09-0048, PMT 590)



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FIGURE 51

CARA DYNAMIC Incubation Temperature with 1.0 CHO3

